App F IX 4

1919. (Nil)

File No. 181-19.

Previous References

Nil 87-17 Secs 3-5 B Sep 17
Do - Secs 18, 26 & 33 May 18
~~Nil~~ 94-16 Secs 49 & 58 B Aug 17
Later References Nil 181-19 Secs 1 & 2 B Mar 20.

Serial Nos. 3, 6-8, 10, 11, 13 & 15

General and Revenue Secretariat.

Serial Nos 11

Part B for May 21

SUBJECT

Construction of a Town Hall in Baroda city

The file closed since since the question of Constructing the Town Hall was ordered to be kept in abeyance in D.O. letter no. R12676-80 — No 171-20-10 of 13 X 21

G R S III—1]

1919 7750

(8

GENERAL AND REVENUE SECRETARIAT.

(Rul)

NOTES

File No. 187/19

FILE HEADING

Construction of Town Hall & Municipal Office buildings

From

The Chairman, Ballarat City Improvement Committee

No. 642/C9 Dated 22.4.20 Received 26.4.20

Diary No. 7750	Enclos 7	Spare Copies	Serial No 3

BRIEF ABSTRACT OF LETTER

Submits for Sanction 3 alternative estimates for laying the foundations of the Town Hall in Ballarat City

NOTES AND ORDERS

H Submits for orders with previous reference

28/4 Rec Secy.

WAN'S OFFIC
ON APR 30 1920
No. 740

2) The opinion of the Chief Engr should be obtd unofficially, after careful scrut, Hkeys PWD 29.4

Notes—First Sheet

+ H

Steward) Please see min 1st Augt 19 & 6th Nov last. Have any revised resolns in connexion with Mr Tribbles claim? Financial aspect of case should be carefully considered by Chairman

G R S III-2]

General and Revenue Secretariat

Wtl File No 181 of 1919

Serial No	
4	From Chairman, City Improvement Committee, Bangalore, No 461 dy 29 4 20 Forwards for information the resolution of the Committee dy 28 4 20 & states that the elevation of the Town Hall is practically the same as was designed by Mr Fritchley & that of the Municipal Office will be made to accord as far as possible with Mr. Fritchley's design & will be submitted to Govt for approval in due course
5	From DO ——— No 460 dy 29.4 20 Forwards in continuation of his letter dy 22 4 20 a copy of the resolution dy 28 4 20 on the estimates for the basement & foundation of the Town Hall
	4) The previous file re - alternative estimates for the foundation & basement of the Town Hall is before the Dewan
	5) May this be submitted in continuation
	6/5
	18-5-20
	6) (The file since has been received from Dewan with orders - Please see para 1 of the notes)

D. 7750
Wtl 181-19

Note—Contn sheet

R. S III-2]

General and Revenue Secretariat | Mil File No 181 of 1919

Serial No.	
6	From Chairman, City Improvt Committee, Bangalore, No 673 dt 8 5 20 Forwards in continuation of his letter No 673 dt 22 4 20 detail plans & estimates amounting to Rs 1,89,166 for the Superstructure of the Town Hall buildings & requests Sanction to the foundation estimates already sent so that the foundation should be put in hand in this Season
7	From Chairman, City Improvt Committee No 490 dt 14 5 20 Forwards in continuation a copy of Mr Bhore's opinion regarding the alternate estimates for the foundation of the Town Hall buildings prepared by Messrs 7) The Structural details report promised in the Chairman's letter of 8th May 1920 had not yet been received 8) The Chairman states in his letter of 29/4/20 that the elevation of the Town Hall is practically the same as was designed by Mr. Critchley 9) Draft Submitted, requesting the Chairman to submit the Structural detail report, for approval. 10) Issue 20 5 20

PUD-No 4

PUD-No 3

NOTE—Contn sheet

G. R S III-2]

8804/27

General and Revenue Secretariat | Mul File No 181 of 191 9

Serial No	
8	To Chairman, C D C Bamalaby R 1320 dy 21.5.20 Requests him to forward the Structural detail report promised in his letter dy 22.4.20
	From Chairman, C D C Bamalaby No 572 dy 26.5.20 Forwards the report to accompany the plan & estimate of the Town Hall 11) Submits for orders with reference to para 3 above Mul 3/6 12) There are 3 points for consideration & orders in this case.—
	1) Steel concrete spread foundation Rs 79000 2) Reinforced concrete pile foundation Rs 63000 3) Solid masonry foundation and sand piles Rs 45000.
	1) Which of the 3 alternative estimates as noted in the margin for foundation & basement of the Town Hall should be adopted — 2) Whether in the revised plan the elevation of the building according to Mr. Fruthley's design, has been kept up? 3) Whether the estimate for Rs 1,89,166 for the superstructure of the building may be approved —

NOTE—Contn sheet

S. III-2]

General and Revenue Secretariat | nil File No 181 of 1919.-20

Serial No	
8	Bombay — The Ex. Engr. & the City Drftd Dr. recommends the Option of the 3d as being the correct & best, while the Drftg Engr. Sanitary Circle, considers 1st one as the best. & suggests that one or two well known firms in Bombay may be consulted & the services of experienced workmen secured for carrying out this class of W/O — as the City Draft Committee has approved the 1st one.
+ Y.	
P	Bombay (2) Elevation — In the Ex. Engrs report it is stated that the front elevation according to Mr. Fruhling's design has been followed as far as possible, & that the side elevation, which according to the revised plan faces the Fort Centre Road has been made interesting in consultation with the Chief Engr., while Mr. Fruhling's side elevation
Vide O and also all plans —	

NOTE—Contn sheet

Plans

~~for the~~ Fort wall & was not seen from either the Fort Custom Road or the Ellepore Road.

Point 3 – The City Draft Committee and the Municipal Council have approved of the Estimate the Details of the Structures are explained in the Ex Engr's report – It does not seem to have been yet scrutinised by any higher Engineers officers –

13) Early orders are asked for by the Chairman of the City Draft Committee, to permit of the work being started soon –

14) Whether the file may be sent to the Chief Engr unofficially for a decisive opinion, is a point for orders

Rev Secy) 15) 28 4/6/20

Dewan) 9-6-20 5-6-20

No. 8023

NOTE—Contn sheet
5-6-20

8814

General and Revenue Secretariat | Mil File No 181 of 1919

Serial No	
11	From Chairman, City Improvt Committee, Bangalore No 516 dy 7 6 20 Forwards Copy of Mr. D'Cruz's remark on Mr Bhore's criticism on the alternative estimate for the foundations of the Town Hall building at Bangalore City 16) Forwarded to the Chief Engr of Mysore, with compliments, for favour of a decisive opinion on the points raised in paragraph 12 of the notes. By Order Srinivasiengar for Dewan Secretary 12.6.20

Bo. Bh 9
L. 9/6

22/Pro
16 June 19 20

NOTE—Contn sheet

8814
8622

General and Revenue Secretariat

Mal File No 181 of 1919

Serial No

No. 232/Plan

14 Imp

Rev Sub 1920

29 JUL 1920

20

17 Returned with compliments-

2. Of the three proposals for foundations of the Town Hall submitted by Mr. D'Cruz, the first, viz., of steel concrete spread foundations is approved, with the following modifications -

(a) A steel concrete raft may be bounded over the whole site instead of limiting it merely to foundation trenches-

(b) The depth of foundations may be 8' and the depth of concrete 3'-

(c) Over the concrete, masonry footing courses for a depth of 5' may be adopted below walls the width of the lowest footing being twice that of the wall-

(d) Sufficient provision may be made in the estimate for driving piles, in case these are found necessary wherever very unstable and treacherous soil is met with-

19 The estimate for foundations required to be modified and completed in all respects on the above lines. This may kindly be got done and forwarded again for formal approval.

2. The estimate for the superstructure and the drawings are retained in this office and will be forwarded later on with necessary remarks.

Bangalore 29th July 1920

Chief Engineer of Mysore.

Jm

NOTE—Contn sheet

R. S. III-2,

General and Revenue Secretariat.

Rel File No. 181 of 1919

'S OFFICE.

JUL 31 1920

No. 683

Serial No.

21 Submitted for orders with a on the basis of the Chief Engr's opinion in the marginal

30-7-20 Dewan)

Draft approved by the Dewan 30/7/20

24 June

3/8/20

13° Letter No. R 1762 of 4-8-20 from the Chairman of Improvement Committee, Bldrs.

Informs them that the Chief Engr considers that the estimate for Rs 7900/- with certain modifications as pointed out in the last minutes for the purpose met an question and requests that the said estimate may therefore be modified on the lines pointed out & resubmitted for the sanction of Govt

14. Letter No. B 1526 of 7-8-20 from the Chief Engr

In orbit of last para of the above cited letter of 29-7-20 forwards an estimate amounting to Rs 1,89,166/- and drawings for the superstructure of the Town Hall in Bangalore and states that

Memo—Contin sheet

1244

R. S III-2)

General and Revenue Secretariat

4ml File No. 181 of 1919

Serial No.

that the estimate is in order and may be sanctioned

2) It is stated that the general elevation of the Town Hall is practically the same as was designed by Mr Fruteley, while the side elevation was modified by Mr D Cruz in consultation with the Chief Engr so as to make it more interesting and that the modified design was approved by the Highness.

26 Mr Fruteley's side elevation toward the Fort Wall and as modified it faces the Fort Centre Road

27 A revised estimate for the foundations of the Town Hall is still due from the Chairman.

Submitted for orders

4/L O
11-8-20

2/ Rev Secy

11 8 20

2) Before placing orders on record approving of the plans and designs, the papers may perhaps be submitted to His Highness for gracious perusal

[The Huzur Secretary has, however, intimated on 16-7-20 to the Chief Engr that the designs have been appd by His Highness]

Dewan 20 Nov cannot be passed 13/8/20
see the Est for superstructure
in red from Ch
Engr
for Inundation pain the chachway
Plans getthere checked 4/11 8 Nov

WAN'S OFFICE.
on AUG 13 1920
No 6013.

Note—Contn sheet

31 J

G. R. S. III-2]

General and Revenue Secretariat | File No. 181 of 1924.

54 / 11

Serial No

15 From the Chairman, Cuttack Improvement Committee No 1442 dt 17-2-24 In reply to 11/13, I submit a copy of the results of the above committee approving the estimate for Rs 78514 providing steel concrete raft only between the main walls & the verandah retaining walls etc as recommended by the Chief Engr.

2. I submit for orders with reference to para 30 supra

Sd/- 21/4/24

Secy 26/2

DEWAN'S OFFICE. Regd. on MAR 4 1924 Reg. No. 5697

33. Dewan In view of the proposal to provide steel concrete raft only between the main walls & verandah retaining walls & not to have cement concrete floor throughout as originally proposed, the estimate has been reduced to Rs 78514 & the Committee has approved the same. I submit for orders.

Sd/- 3.3.24

Put up with Secretary's reference to para 29 ante Sd/- 21.3.24

Sd/- 15.3.24.

NOTE—Contn. sheet.

Sd/- 21/3

H.E.H.

G R. S III-2]

6854/12

General and Revenue Secretariat. | File No | of 19

Serial No.

34 In accordance with instructions given, the note below is examined and submitted

Secretary

14 5 21

35 Chief circulate & consider at conf next Tuesday

18 5 21

Chief Engr Comptd

Council Section. Circulate.

36 What can be ascertained of cause & completion the items of work mentioned in the Chief Engr's letter dated 14 5 21 Shd it seems that in view of the financial crisis which is likely to persist for some time the works have got to be deferred. In view of this it seems unnecessary to continue that Separate Agency. The City Improvement Com the work that has got the done which is attempted to grant may well be left to the City Impt Cl.

Asst Secy

25 5 21

NOTE—Contn sheet.

Construction of a (13 town hall in Bangalore —

In G O Nos. R 11276-7 and 181-19 -2 of the 29th March 1920 the sketch plans of the Iron Hall and the Municipal Offices buildings in the Bangalore City were sanctioned at a cost of Rs 5½ lakhs (including the cost of furniture and other accessories)

The Chairman City Improvement Committee Bangalore forwarded three alternative estimates for the foundation and basement of the Iron hall with his no 1142 of the 22nd April 1920 together with the resolution of the Committee approving an estimate for Rs 79000/-

~~Upon which he letter no~~

He has subsequently forwarded detailed plans and estimate for the superstructure of the building amounting to Rs 1,89 166 with his letter no 413 of 6th May 1920 and requested sanction for the both the basement and the superstructure

The Chief Engineer was consulted in the matter and approved of the estimate for Rs 79000/ for the basement with certain modifications which was communicated to the Chairman

Page 4

and Engineer asked him modify the estimates on the lines suggested by the Chief Engineer

The chairman has accordingly resubmitted the estimate duly modified for Rs 78514/- vide his letter No 1492 A dtd 7th July 1921 and requested sanction of Govt hereto

The Board in this proposal that the work here to be delayed in view of the present financial situation vide order dt 18-2-21 para 33 of the notes.

The Hon'ble I member is of opinion that the work has to be postponed and that it is unnecessary to entertain a separate agency and the entire work should be done by Municipal Council

(1) - Sanction to the estimate for Rs 78514/- is accorded

(2) whether the tenders should be called for

The question of Engineering College Hall was ordered to be kept in abeyance for want of funds in the letter dt R 12676-Govt dtd 17-10-20 dt 13.5.21 & no new file will be opened

REV SEC
5 AUG
L & ...

3/8/21

(13)
No. 11

Subject.

Construction of a Town Hall in Bangalore and the question of continuing the City Improvement Committee.

OPINION OF THE COUNCIL.

Interview held 14/7

G.O. Ms. 10

4

The Palace,
Bangalore

12th July 1921.

Dear Mr. Matthan,

I have your letter No 164/C.B. dated the 9th July, with enclosure, in regard to the Bangalore City Improvement Committee. I shall discuss the subject with the Dewan

Yours sincerely,
Mirza M Ismail

15

KG4/CB
Encl 1

9/7/21

Dear Mr. Mirza,

I am desired to enclose a copy of a note prepared under the orders of the Dewan in which the continuance of of the Bangalore City Improvement Committee has been discussed. The Dewan intends to talk the matter over with you at an early date before the matter is formally taken up in Council.

Yours sincerely,

Amir-ul-mulk
Mirza M. Ismail, Esq., B.A.,
Huzur Secretary to His Highness
the Maharaja of Mysore.

(87

Subject.-

~~[illegible]~~

Plot [~~Construction of a Town Hall~~ in Bangalore, and questions connected with the City Improvement Committee

OPINION OF THE COUNCIL

~~[illegible]~~

(For Disposal at a Meeting)

No C 658
1920-21

GENERAL AND REVENUE SECRETARIAT

Council Matter

SUBJECT

(Clause xx of the schedule)

Construction of a Town Hall in Bangalore

CIRCULATED TO THE MEMBERS OF COUNCIL

By Order,

21st May 1921

Chief Secretary to Government

Extraordinary Member of Council

First Member of Council Opinion recorded

Second Member of Council

Third Member of Council

(19

Note on the estimates for the Town Hall, Bangalore City, and other kindred questions

******

The site for the Town Hall was approved in Government Order No 7477-9/M1 110-18-66 dated the 7th January 1920, and the plans and elevations in Government Order No. R 11276-7/M1 181-19-2 dated the 27th March 1920 The estimates now submitted consist of two parts (1) foundation and (2) superstructure Those for the former as approved by the Chief Engineer and the City Improvement Committee amount to Rs 78,514 and those for the latter to Rs 1,89,166 In view of the present financial stringency the whole work has to be stopped for the time being So far work to the extent of only Rs 4,277, has been done and there is no disadvantage whatever likely to accrue as the result of the cessation of the work.

3 The City drainage estimates, too, came up for consideration recently The estimates cost Rs 18,21 900 approximately and the Government grant towards the work will be half this sum (whereas in the case of the Town Hall and other works, it is two-thirds) Pending sanction to the comprehensive scheme, the City Improvement Committee sought sanction to carry out a portion of it considered very necessary now to serve the following areas, viz , New General Market, New Bamboo Bazaar Town Hall and Visveswarapura Extension In reply to a query as to whether the cost (Rs 1,20,820) of this part of the work could first be wholly met out of the Municipal funds, the Honorary President, City Municipal

Council

Council, says that the Municipal Council can only meet its quota, namely half, and that too if it is spread over two or three years. In these circumstances the drainage works too will have to be postponed to be taken up at the earliest opportunity

3 Out of the works proposed to be carried out by the City Improvement Committee during 1921-22 Rs. [illegible] have been budgetted for as the Government's share of the cost on account of the above two works But the allotment for Bangalore City Improvement, in the State Budget for 1921-22 being only Rs 75,000, there will be only Rs 58,333 available for all works after deducting the money required as grant towards meeting Establishment and other charges, viz , Rs 16 6

4 The question now arises very properly if it is necessary, in view of the financial stringency that has now arisen being likely to persist for some time to keep up the machinery of the Improvement Committee as distinct from that of the City Municipal Council, in order to carry out works towards the contribution for which Government may not spare more than about Rs 60,000 annually The devising of the plans for the works of the City has been well thought out and planned already as shown in the review of the work of Bangalore City Improvement (Government Order No 5682-7/ M1 1-19-2 dated the 14th November 1919) Whenever the magnitude of the works increases or entirely new and complex questions regarding the growth of the City arises, then the City Improvement Committee may be re-constituted as required In this connection, attention is invited to paragraph 3 of Government Order No 7335-7/ M1 1-19-7 dated the 2nd January 1920 reconstituting the present Committee wherein reference is pointedly made to the magnitude and importance of the works to be

carried

carried out and the large share of the cost thereof to be borne by Government which happened to be the factors at the time.

5. The City Municipal Council can very well administer the reduced grants as contemplated by Government In fact, they may be glad to co-operate with Government in reducing the cost of the establishments of the City Improvement which are found to some extent to be redundan at the present juncture. After the question of policy is decided, definite proposals will be elaborated for re-arranging the work of the Bangalore City Improvement on the lines indicated herein.

14-5-21

(21

BANGALORE CITY IMPROVEMENT WORKS

proposed to be undertaken during 1921-22.

*****

Name of Work	Amount of Estimate	Outlay to end of previous year	Grant from Govt	Remarks
Constructing the interior stalls of the New General Market	1,56,000	77,729	33,333 (2/3)	
Laying out roads and drains to the New Bamboo Bazaar.	32,040	29,355	2,000 (2/3)	
Constructing Town Hall at Bangalore	2,68,166	31,277	40,000 (2/3)	
Easing the Kink and re-grading the bed of the main drain near the Market	82,155	15,000	20,000 (2/3)	
Re-arrangement of the Palace Upparahally and Dobbspet villages	69,270	-	5,000 (1/2)	
Constructing main and sub mains required to connect the drainage of Visweswarapura Extension, Bamboo Bazaar and the Market	1,20,020	-	8,000 (1/2)	
	Total	-	1,08,333	

N O T E.-

The improvement of Avenue Road near the Palace Gate, carried out by the Mlty has been omitted as the work was stated to be completed during the current year If the work is not likely to be finished, funds required for 1921-22 may be provided by reduction under item No 6

(22

Amount of Estimate	Grant from Government	Remarks.
ESTABLISHMENT.		
Executive and Office. 1.500 X 12 — 18,000		
Allowances to Chairman and Office 352 X 12 . — 4,224		
CONTINGENCIES.		
Chairman's Office (A) .. — 1,160		
Executive Engineer's Office (B) . — 1,500	16,589 (2/3)	
Tools & plant	78 (2/3)	
16,667	1,160.	

DETAILS.

A.		B.
460	Purchase of annual supply of Stationery	614
360	Sundry articles at Rs 30 and Rs 20 per month	240
290	Printing and advertising charges	
50	Clothing to menials	
.	Office rent (55 x 12)	660
1,160.	Total	1,514

(51

Mysore Public Works Department,
Central Office.
Dated Bangalore 7th August 1920.

D No. 1244
18-8-20
Dne 18-19-14

M.J.S. [illegible], Esq.,
Chief Engineer of Mysore,
Bangalore.

S. [illegible]aiya, Esq., B.A., B.L.,
Secretary to the Government of Mysore,
Revenue Department, Bangalore.

With reference to correspondence ending with this office Un-official No.232/P.W.D. dated 14th June 1920, returning your Un-official No.136 dated the 12th June 1920, with certain observations, I have the honour to forward herewith the estimate and drawings for the superstructure of the new Town Hall in Bangalore.

2. The elevations for the building were modified by Mr.D'Cura in consultation with me. The front elevation is practically the same as was designed by Mr.Fritchley. While the side elevation is made more interesting as in the present setting of the Town Hall, it faces the Fort Centre Road.

3. In this connection, a copy of D.O.letter No.85 dated 16th July 1920, from the Huzur Secretary, communicating the approval of His Highness to the modified design is also forwarded for information.

4. The estimate for the superstructure is in order and may be sanctioned.

Enclosures -
1 Estimate
1 Report
5 Blue Prints
1 Copy of DO letter

I have the honour to be,
Sir,
Your most obedient servant,
Chief Engineer of Mysore.

52

D. O.No.85 dated the 16th July 1920 from the Musur Secretary to His Highness the Maharaja of Mysore, to the Chief Engineer of Mysore, Bangalore.

I am directed to convey approval to the designs for the New Town Hall and Municipal Offices in Bangalore, received with your D.O.letter No.27 dated the 15th instant.

The designs, in questions, are returned herewith.

True Copy

Assistant Secretary to Government,
Public Works Department.

J.R.40m.

No. 513 OFFICE OF THE CHAIRMAN CITY IMPROVEMENT COMMITTEE.

Encls One. *Dated Bangalore* 7th/8th June 1920

Rev Sect 9 JUN 1920

D No. 8814
10.6.20

From

DEWAN BAHADUR RAJASABHABHUSHANA
K. P PUTTANNA CHETTY, ESQ., C I E,
Chairman, City Improvement Committee
Bangalore

32773

Mel 181-19-11

To

B. Ramaswamaiya Esq, B A, B L,
Secretary to the Government of His Highness the
Maharaja of Mysore, Revenue Department,
B a n g a l o r e

SIR,

3629 -19 Mary 46

In continuation of my letter No 490 dated 14th May 1920 forwarding copy of Mr Bhore's opinion on the alternative estimates for the foundations of the Town Hall, I have the honor to submit herewith copy of Mr. D'Cruz's remarks on Mr Bhore's criticism

I have the honor to be,

Sir,

Your most obedient servant,

K P Puttannachetty

Chairman,
City Improvement Committee
Bangalore

Remarks of the Executive Engineer, City Improvement Division, Bangalore, on the opinion of Mr. Bhare regarding the alternative estimates of foundation of the Town Hall

---

1. Sand piling is used only in the case where natural earth is found to be plastic or soft clay, as in this case

2. Sand piling is much easier and does not require pile driving apparatus as the holes are made in the foundation trench, so that the pile driving hammer has not to be raised much above the ground level. In this case the foundation trench will be from 8' to 10' when natural clay is reached and piles will then be driven below foundation bed, just to stiffen or harden the natural clay. All that is wanted is a winch, a rope, a weight and a tressel

3 Why Mr. Bhore thinks that greater care is required for sand pile work than for reinforced concrete pile work, I do not know

Sd. J E A. D'Cruz
Executive Engineer

"C O P Y"

Chairman,
City Improvement Committee,
Bangalore.

S VI—G/32]

Section

~~File No~~

Serial No

AND REVENUE SECRETARIAT

No R 1762

Dt 4-0-20

To

Sir,

With reference to the correspondence ending with your letter No. 518 of the 7th June 1920, I am directed to state that the Chief Engineer considers that out of the 3 alternative estimates prepared and submitted by Mr. D'Cruz for the foundation of the Town Hall in the Bandra land

over

the one way of Rcc Overbridge Thread
foundations at a cost of Rs 79,000/-
with the ungarnished stone materials
obtainable in the least suited for the
purpose mentioned therein and to suggest
that the said estimate may be
modified and completed in all
respects on the above lines and re-
submitted very early for the consid-
eration of Govt

2. The 3 alternatives mentioned
and the plan annexed in the
matter are enclosed herewith. The
matter should be treated as very
requiring immediate attention

I have

Jan 35 20 20

(1) A Rcc Overbridge
may be provided
where rate instead
Limiting it merely
to Foundations trenches

(2) The depth of
may be 8' and the
of Concrete 3'
left

(3) over the Concrete,
footing courses for a
of 8' may be adopted
wally, the width of the
footing being twice
the wall

(4) Sufficient provision
be made in the
used for draining pits, in
20 20 case are found
Instead of embankments
wherever very
and treacherous
met with

30.7.20

Copied by

Examined by

WD 1744—GPB—20,000—19-8-19

46

No 512 OFFICE OF THE CHAIRMAN CITY IMPROVEMENT COMMITTEE

Encls 1 *Dated Bangalore* 26th May 27 1920

D No 8628
31 5 20

From

DEWAN BAHADUR RAJASABHABHUSHANA
K P PUTTANNA CHETTY, ESQ, CIE,
Chairman, City Improvement Committee
Bangalore

Ml 181-19-10

To

B. Ramaswamaiya Esq, B A, B.L,
Secretary to the Government of His Highness the
Maharaja of Mysore, Revenue Department,
B a n g a l o r e.

SIR,

As called for in your letter No R 13,200-M1 181-19-8 dated 21st instant, I have the honor to submit herewith the Report to accompany the plan and estimate of the Town Hall prepared by Mr. D'Cruz, Executive Engineer, City Improvement Division

I have the honor to be,

Sir,

Your most obedient servant,

1

Chairman,
City Improvement Committee,
Bangalore

G R. S VI—G/32]

SUBJECT Town Hall buildings, Bawalpur City

Diary No of letter replied to 8314

L AND REVENUE SECRETARIAT
(Nil)
the 191

Date of issue .. 21-5-20

Signed by [illegible]

Section Nil
File No 181-G
Serial No. 8

c R 132.00

To

The Chairman, City Dvpt Committee, Bawalpur

Sir,

With reference to the Correspondence ending with your letter No 490 dt 14-5-20 requesting the estimates for the Town Hall building, I am directed to request you to be so good as to forward the Structural detail report promised in your letter under No 473922-G 20 at an early date

Thanking you,

I am
Sir
Your Obt Servt

3. The Council respectfully commend that Government pleased to pass orders as early as possible so that construction work may be started at once.

Bd. D.K. Sarvadachar
President.

"COPY"

Chairman,
City Improvement Committee,
Bangalore.

Proceedings of the Bangalore City Improvement Committee which met on the 28th April 1920 in the Council Chamber of the Bangalore City Municipal Council.

Present.

1. Dewan Bahadur Rajasabha Bhushana K.P. Puttanna Chetty [illegible] C.I.E. (Chairman)
2. B K. Garudachar Esqr. (Vice Chairman)
3. J. Khare Esqr A.M.I.C.E
4. A.K. Pani Esqr., D P.H.
5. M. Subbaiya Esqr, B.A.
6. M. Ramachandra Rao Sindia Esqr
7. V.Lakshmanaswami Esqr.
8. H Usman Khan Esqr.

Absent

1. Rev. D.A Rees
2. K. Srenivasa Rao Esqr, B A
3. B. Chinnaswamy Chetty Esqr
4. B. Abdur Rahman Esqr., B A

XX XX XX

7. Consideration of the detail plans and estimates of the Town Hall prepared by the Executive Engineer, City Improvement Division

Resolution -- The detail plans and estimates of the Town Hall amounting to Rs 1,89,166/- for superstructure only are approved They should be submitted to Government early for sanction with the approval of the Municipal Council

Note The acoustic properties of the building should be discussed in the report accompanying the estimate

Sd K P Puttanna Chetty
hairman

"COPY"

K P Puttanna Chetty
Chairman,
City Improvement Committee
Bangalore

Bangalore
3 Alternative
for the time.

Proceedings of the Ordinary General Meeting of the City Municipal Council Bangalore, held in the Council Chamber, City Municipal Office at 8 A.M. on Saturday the 1st May 1920.

Present.

S.K. Gurudachem Esqr , President.

K P Puttanna Chetty Esqr

Municipal Councillors.

1. B. Srinivasa Iyengar Esqr., B A., B L
2. B. Chinnaswamy Chetty Esqr
3. Desada Siddabasappa Setty Esqr
4. C.V. Narasimha Iyengar Esqr , B A B
5. P.M. Basappa Esqr
6. Desada Veerabhadra Setty Esqr.
7. G Siddaveerappa Esqr
8. D Adeppa Esqr
9. B.V Ramaswami Chetty Esqr , B.A.
10. R. Gopalaswami Iyer Esqr
11. S. Venkatachala Iyengar Esqr , B A , B L ,
12. H. Krishnappa Esqr , B A
13. S. Venkataranga Iyengar Esqr
14. B V Krishna Iyengar Esqr
15. B. Usman Khan Esqr
16. M Ramachandra Rao Sindhe Esqr
17. S.K. Narasimhiah Esqr
18. P. Subbarama Chetty Esqr.
19. H.B. Srikantiah Esqr.

Absent.

1. L.A. Pourwal Esqr
2. M. Subbayya Esqr , B A
3. H. Ramaiya Esqr.
4. M.K. Krishnamurti Rao Esqr
5. M. Venkatasubbiah Esqr
6. M Abbas Khan Esqr
7. Rev. D.A. Rees
8. D.M Gnanapriam Pillay Esqr

Additional Subject.

XXX XXX XXX

4. Letter No.469 dated 29th April 1920 from the Chairman, City Improvement Committee, Bangalore, forwarding final plans and estimates amounting to Rs.1,89,166/- for the Town Hall, and requesting to obtain the approval of the Municipal Council.

Resolution -- The final plans and estimates for Rs 1,89,166/- for the superstructure of the Town Hall are approved

2 The action taken by the Chairman, City Improvement Committee Bangalore, vide his letter No.442 dated 21st April 1920 in submitting 3 alternative estimates for foundation and basement of the Town Hall for the final decision of Government is also approved

No 473 OFFICE OF THE CHAIRMAN CITY IMPROVEMENT COMMITTEE

Encls 5 plans, 2 Resolutions, 1 Estimate — 8

Dated, Bangalore 8th May 1920

10

D No 8212

12 5 20

From

DEWAN BAHADUR RAJASABHABHUSHANA
K P PUTTANNA CHETTY, ESQ, CIE,
Chairman, City Improvement Committee
Bangalore

187

To

Jud. 181 - 19-6

B. Ramaswamaiya Esqr., B A, B.L.,
Secretary to the Government of His Highness the
Maharaja of Mysore, Revenue Department,
B a n g a l o r e.

Sir,

In continuation of my letter No 442 dated 22nd April 1920 submitting three alternative plans and estimates for the foundation and basement of the Town Hall, I have the honor to submit herewith for sanction of Government detail plans and estimates amounting to Rs.1,89,166/- for the superstructure of the said building, together with a copy of the City Improvement Committee's resolution dated 28th April 1920 approving the same / The structural details are fully dealt with in the report accompanying the estimate

2. The Municipal Council have also approved of the aforesaid plans and estimates and I submit herewith a copy of their resolution dated the 1st instant

3 I request that you will be so good as to obtain the very early sanction of Government to the foundation estimates already submitted and the superstructure estimates herewith sent

4 The City Municipal Council and the City Improvement Committee are anxious that the foundations should be put in hand in this season.

I have the honor to be,
Sir,
Your most obedient servant,
K P Puttanna Chetty
Chairman,
City Improvement Committee,
Bangalore

FM

N 1761

Govt Copy 5 70

Proceedings of the Bangalore City Improvement Committee held on the 20th April 1920 in the Council Chamber of the Bangalore City Municipal Council.

Present:

Rao Bahadur [illegible]

K.P. Puttanna Chetty Esqr., B.A.,B.L. (Chairman).

B.K. Garudachar Esqr., (Vice Chairman)

2. J. Bhore Esqr., A.M.I.C.E.

3. A.A. Pasi Esqr., B.A.M

4. M. Subbaiya [illegible]

5. M. Ramachandra Rao [illegible]

6. V. Lakshmanaswami Esqr.

7. R. Usman Khan Esqr.

Absent.

1. Rev. D.A. Rees

2. K. Srinivasa Rao Esqr., B.A

3. B. Chinnaswamy Chetty Esqr.

4. D. Abdur Rahman Esqr., B.A.

XX XX XX

6 Letter No 451/M1 dated 12th April 1920 from the Executive Engineer, City Improvement Division, submitting 3 alternative estimates for the foundation and basement of the Town Hall

Also letter No 442 dated 21st April 1920 from the Chairman, City Improvement Committee, to the Secretary to the Government, Revenue Department, submitting the 3 alternative estimates for early orders of Government

Resolution -- Recorded Mr Bhore has promised to send his opinion, which when received will be submitted to Government and copy will be circulated to members of the City Improvement Committee.

Sd K P Puttanna Chetty,
Chairman,

"C O P Y"

Chairman

D.T.996 8/5/20

No 460 OFFICE OF THE CHAIRMAN CITY IMPROVEMENT COMMITTEE

Dated Bangalore 29th April 1920

Encls One

37

6

From

MAY 1920

DEWAN BAHADUR RAJASABHABHUSHANA
K P PUTTANNA CHETTY, ESQ, CIE,
Chairman. Citu Improvement Committee
Bangalore

To Rl 181-19-5

B. Ramaswamaiya Esqr, B A, B L,
Secretary to the Government of His Highness the
Maharaja of Mysore,
Revenue Department,
B a n g a l o r e

SIR,

D 7750 Dewan 21/4

In continuation of my letter No 442 dated 22nd April 1920, submitting for sanction 3 alternative estimates for the foundation and basement of the Town Hall, I have the honor to submit herewith, for the information of Government, a copy of the City Improvement Committee's resolution dated the 28th April 1920 in the matter

I have the honor to be,

Sir,

Your most obedient servant,

K P Puttannachetty

Chairman,
City Improvement Committee,
Bangalore

Copy of letter No 442/M1 dated 8/9th April 19 from the Executive Engineer, City Improvement Division, Bangalore, to the Chairman, City Improvement Committee, Bangalore

---

With reference to your Memo No.385 dated 31st March 1920, forwarding copy of Government Order No.11276-7/M1 181-19-2 dated 27th March 1920 approving the revised sketch plans of the Town Hall and Municipal Offices in the Bangalore City prepared by me with the observation that the elevation of either buildings as designed by Mr. Fritchley should be adopted as far as possible, I have the honor to state that, in the case of Town Hall, the front elevation given by Mr. Fritchley has been followed as far as possible The side elevation which in the present setting of the Town Hall faces the Fort Centre Road has been made interesting in consultation with the Chief Engineer Mr. Fritchley's side elevation faced the Fort wall and was not seen from either the Fort Centre Road or the Mysore Road . A verandah in place of an open terrace has been added on the east and west for protection against weather and for architectural effect

2 With regard to the Municipal Offices, it is not possible to adopt Mr Fritchley's frontage in full, as the ground plan of the building has to be arranged to suit the site and as a central clock tower is not required, there being one in the Central College The Architectural treatment of the rest is similar to Mr Fritchley's

3 If the dome be not approved as a central feature of the Municipal Office, an alternative design would be submitted

"COPY"

Chairman,
City Improvement Committee,
Bangalore

180

9

(34

No 461 OFFICE OF THE CHAIRMAN CITY IMPROVEMENT COMMITTEE

Encls 2 *Dated Bangalore* 29th April 192 0

From

DEWAN BAHADUR RAJASABHABHUSHANA
K. P PUTTANNA CHETTY, ESQ, CIE,
Chairman, City Improvement Committee
Bangalore

To Ml 181-19-4

B. Ramaswamaiya Esqr ,B A ,B L ,
Secretary to the Government of His Highness the
Maharaja of Mysore,
Revenue Department,
B a n g a l o r e

SIR,

With reference to Government Proceedings No R 11276-7 Ml.181-19-2 dated 27th March 1920 approving the revised sketch plans for the Town Hall and Municipal Office buildings in the Bangalore City with the observation that the elevations as designed by Mr Fritchley should be adopted as far as possible in respect of both the buildings, I have the honor to submit herewith for the information of Government a copy of the City Improvement Committee's resolution dated the 28th April 1920, together with a copy of letter No 442/Ml dated the 7th April 1920 from the Executive Engineer, City Improvement Division , referred to in the resolution

2 The elevation of the Town Hall is practically the same as was designed by Mr. Fritchley The elevation of the Municipal Office will be made to accord as far as possible with Mr Fritchley's design and will be submitted to Government for approval in due course

I have the honor to be,

Sir,

Your most obedient servant,

K P Puttannachetty

Chairman,
City Improvement Committee,
Bangalore

PKR

OFFICE OF THE CHAIRMAN, CITY IMPROVEMENT COMMITTEE

Proceedings of the Bangalore City [illegible] Committee which on the 20th April 1920 in the Council Chamber of the Bangalore Council.

P 314

15-6-20

Present.

1. Rao Bahadur [illegible] Chetty Garu, B.A., (Chairman)
K.P. Puttanna Chetty Esqr., B.A., (Chairman, City Improvement Committee)
B.R. Gavindacharlu Esqr., (Vice Chairman)
2. J. [illegible] Esqr., A.M.I.C.E.
4. A.M. Pani Esqr., B.P.W.
5. K. Subbaiya Esqr., [illegible]
6. M. Ramachandra Rao [illegible] Esqr.
7. V. Lakshmanaswami Esqr.
8. B. Ullah Khan Esqr.

Absent.

1. Revd. F.J. Rodd
2. K. [illegible] Rao Esqr., B.A.,
3. D. [illegible] Chetty Esqr.
4. B. [illegible] Rangaya Esqr., B.A.

XX XX XX

5 G O No M 11276-7/M1,181-19-2 dated the 27-3-1920 approving the revised sketch plans for the Town Hall and Municipal Office buildings with the observation that the elevation as designed by Mr. Fritchley should be adopted as far as possible in respect of both the buildings.

Also letter No.442/M1 dated 7th April 1920 from the Executive Engineer, City Improvement Division reporting on the above observation

Resolution -- The design and elevation of the revised sketch plan of the Town Hall are the same as Mr Fritchley's with only slight modifications As for the Municipal Offices, owing to the change of site and the omission of Central clock tower, the entire design of Mr Fritchley cannot be adopted for reasons given in the Executive Engineer's letter

" C O P Y "

Sd K P Puttanna Chetty
airman

No 490 OFFICE OF THE CHAIRMAN, CITY IMPROVEMENT COMMITTEE

Encls —

Dated Bangalore 14th May 1920

From

DEWAN BAHADUR RAJASABHABHUSHANA
K P PUTTENNA CHETTY, ESQ, CIE,
Chairman, City Improvement Committee
Bangalore

To

B. Rangaswamaiya Esqr., B.A, B.L,
Secretary to the Government of His Highness the
Maharaja of Mysore, Revenue Department,
B a n g a l o r e

SIR,

In continuation of my letter No 442 dated the 22nd April 1920, forwarding three alternative estimates for the foundation and basement of the Town Hall, I have the honor to submit herewith for the information of Government a copy of the opinion of Mr. J Bhore, Superintending Engineer, Sanitary Circle, regarding the said alternative estimates prepared by the Executive Engineer, City Improvement Division

I have the honor to be,

Sir,

Your most obedient servant,

K P Puttannachetty

Chairman,
City Improvement Committee,
Bangalore

this class of work They would gladly undertake it and guarantee its efficiency. Necessary information could be given to them and quotations called for

I therefore suggest that necessary drawings may be sent to one or two well known firms dealing in this class of work and their specifications and quotations may be called for

Sd. J. Bhore

Superintending Engineer
Sanitary Circle

" C O P Y "

Chairman,
City Improvement Committee,
Bangalore

N o t e

(43

Foundation of solid masonry with footings of the usual type is not possible as the soil is bad

There are two general methods of treating building foundations on bad soil (a) by placing steel concrete spread footings under walls and columns (b) by steel concrete foundation raft over the whole site. Foundation raft may be divided into two types, the plain and the ribbed. The former is more easily constructed, being generally of uniform thickness throughout and re-inforced with one or two layers of expanded steel But the ribbed raft is really better in as much as the same volume of concrete as in the plain raft can be used to greater advantage in the ribbed raft

Mr. D'Cruz submits three proposals for foundations of the Town Hall -

(1) Steel concrete spread foundations-cost Rs 79,000/-

(2) Reinforced concrete pile foundation-cost Rs 63,000/-

(3) Solid masonry foundation on sand piles-cost Rs 45,000/-

He recommends proposal (3) costing Rs 45,000/- as it is easy of construction and the cheapest and no special expert knowledge being necessary in this case I am afraid that I cannot agree with him I think that equal skill and expert knowledge is required in doing reinforced concrete pile work as in reinforced concrete foundation work and I should say that greater care and expert knowledge is required for sand pile work than for reinforced concrete pile work

This estimate will moreover have to be increased by Rs 10,000/- as it will be necessary to purchase a pile driving plant Thus estimate (3) will cost not less than Rs 55,000/- I am afraid the pile work cannot be done satisfactorily and therefore do not recommend this proposal I do not think it advisable to take any risk

In my opinion the best proposal is No 1 which provides for reinforced concrete with spread foundations at a cost of Rs 79,000/-

There is absolutely no difficulty in getting expert workmen to do this work. There are firms in Bombay who make a speciality of

Foundation for Town Hall at Ennis.

32

Earth work excavation Block No 147	2	118	28				
" " 246	2	115	11				
" " 345	2	107	17		10	196640	19664 0
" " 4	1	115/2	50				
" " 8	1	84	13/4				
Earth work filling in basement							
Hall	1	69½	99½				
Stage	1	40/4	69½				
Staircase	4	14/2	27		5	21750	
Side Verandah	4	40/2	24				
do	2	13/2	40½				
Front do	1	13/2	69½				
Total cutting & filling						168390	off 2683·90
Concrete	2	118	28				
	2	115	11				
	2	107	17		5	98320	" 98320
	1	115	50				
	1	84	13/4				
Foundation							
Long walls of Stage, Hall, Front Verandah	2	164¾	9+3/2		5	9862	
Front wall of Hall	" 1	66/2	9+3/2		5	1995	
Rear wall of Hall	" 1	66/2	8+6/2		5	1995	
Wall around the Tower	" 4	36/4	3½+8½/2		5	4795	
Adjacent portion of Tower	" 4	27/2	2+6/2+3½/2		5	3300	
Front Verandah Wall	" 1	66/2	3+5/2+4/2		5	1995	
Side Verandah walls	" 2	92/2	2½+6/2+4/2		5	5350	
Corner rooms	" 2	22	2½+6/2+3½/2		5	1330	
Front wall of Stage	1	66/2	2½+5½/2		5	1995	
Total						32807	off 32807

Abstract

Item of work	Per	Rate	Qty	Cost
Earth work excavation & filling	100 Cft	1	2683	2683
Concrete	100 "	25	18320	4580
Foundation	100 "	31 4	32307	10251
Brickwork	100 "	31 4	22458	7018
Rubble masonry & Cement pointing	100 "	45	5335	2401
Brick Stonework 6" to 9" thick including				
Arches & dressing	Sft	0 14	4665	1632
do 6" thick rough dressed	"	0 10	212	133
Cut Stone Coping	Cft	1 12	395	691
Contingencies Charge	Lumpsum			475
Extra work as per Estimate			4	2000
			51840	29911
			2000	3104
Total			53840	40000
Contingencies at 5%			2692	2000
				2925
Grand Total			56532	42925
				As 5.42.925

Rs 42925

City Improvements

List of city Improvements works

	Name of work	Amount of Estimate	Outlay to end of previous years		Grant	
					Proportion Government	
	1 Works the cost of which is paid partly by Govt. partly by Municipality					
1	Constructing the extension of Halls of the New General Market	156000	77729	2/3	33333	1/2
2	Laying out Roads and drains to the New Bamboo Bazaar	32040	29355	2/3	2000	1/2
3	Constructing Town Hall at Bangalore	268166	31277	2/3	40000	1/2
4	Easing the Kink and re-grading the bed of the Main drain near the Market	82155	15000	2/3	20000	1/2
5	Re-arrangement of the palace approaches and Bobbopet Villages	69270	"	1/2	5000	1/2
6	Constructing main and Submains required to connect the drainage of Vasavi and Puma Extension Bamboo Bazaar and Market	120520	"	1/2	8000	1/2
			Total		108333	

Proposal to be rendered during 1921 – 22 (38)

Name of Village	Cash		Total	Remarks
	From Panchayat	Total	Expenditure	

	11 Works the Cost of which is wholly paid by the Municipality						
1	Laying out of Various Extensions to the East of Hoskote Road	525100	268673	"	"	"	
2	Laying out Hosakota Road into Shoja Sites	13153	"	"			
3	Constructing Cloth Bazaar in the New General Market	108940	"	"			
	Total						
	Total works 11				108333		
	Establishment				108333		
	Executive and Office 1500 X 12	18000					
	Allowances Chairman 352 X 12 and Office	4224					
	Contingencies Chairman Office	1160					
	Do Exe Engineers Office	1500	2/	2/3	1658	1/3	
	Tools and Plant			2/3	78	1/3	
	[illegible] for 1921-22 [illegible]				125000		

			Original Estimate for Rs 36640 was sanctioned on 4 8 19, a revised Estimate for Rs 52510 0 was submitted vide no 107 of 18-8 2(
90000	90000	35-8673	& Sanctioned is awaited
10000	10000	10000	Estimate Sanctioned Once revised for Rs 17950 and forwarded to the Municipal Council
40000	40000	40,000	The Estimate and plans approved by the Municipal Council in its resolution on the 2 4 21 Vide Letter no 1800 of 8 4 21 from the Secretary
140,000	140,000	~~140,000~~	
~~30066~~ ~~105333~~	~~30000~~ 240667	309000	

Schedule -

4 60-0-0	purchase of annual Supply of Stationary	13
360-0-0	Sundry articles @ Rs 30 per month	614 240
8295 38	24884 116	
290+0-0	printing and advertising Charges	4
50-0-0	Clothing to menials	4
"	Office Rent 55 x 12	660
1160-0-0	Total	1514

Chairman,
City Improvement Committee.

Executive Engineer
City Improvement Division

(23

No 442/C5 OFFICE OF THE CHAIRMAN CITY IMPROVEMENT COMMITTEE

Encls 7

Dated Bangalore 22nd April 1920

D No 7750
22-4-20

From

DEWAN BAHADUR RAJASABHABHUSHANA
K P PUTTANNA CHETTY, ESQ, CIE,
Chairman, City Improvement Committee

Bangalore 3
Jul 81-19-22

To

B. Ramaswamaiya Esqr., B A, B L,
Secretary to the Government of His Highness the
Maharaja of Mysore,
Revenue Department,
BANGALORE

SIR,

With reference to Government Proceedings No R 11276-7 Ml 181-19-2 dated the 27th March 1920, sanctioning the sketch plans for the Town Hall and Municipal Office buildings, I have the honor to submit herewith the ground plan and 3 alternative estimates for the foundations and basement of the Town Hall, together with 3 calculation sheets and a copy of the explanatory covering letter from Mr J E A D'Cruz, Executive Engineer, City Improvement Division

2 Estimate No 1 for Rs 79,000/- provides for a pressure of 3/4 ton per sq ft on foundation soil by reducing the weight of masonry in foundation below ground level and bedding on reinforced concrete to secure the requisite strength Estimate No II for Rs 63,000/- provides for a foundation on reinforced concrete piles, the safe bearing capacity of which is estimated at 18 tons at a depth of 20' from surface A platform of reinforced concrete 3/4' in depth over the heads of the piles with 1½' of masonry above it would carry the basement and superstructure This method while lessening the weight of masonry below ground level will secure at a greater depth a better bearing capacity of soil and meet the contingency of founding in water Estimate No III for Rs 45,000/- provides for solid masonry foundations limiting the pressure on soil to

From

The Chairman,
City Improvement Committe
B a n g a l o r e.

To

The Secretary,
Revenue Department,
B a n g a l o r e.

Dated 22nd April 1920

Enclosures.

No.

Subject.

Submits for sanction 3 alternative estimates for the foundat of the Town Hall in the Bangalore City.

one ton per sq ft. To secure greater bearing capacity of the soil it is proposed to consolidate it at the foundation level i.e 10 feet below ground level by driving sand piles. This device is reported to have been successfully tried where soil was found to be yielding clay Sand piles are formed by driving wooden or other piles to a sufficient depth 6" to 10" diameters generally, and drawing them out and filling the holes so left, with sand consolidated The soil between the piles gets consolidated and is able to bear a higher soil pressure when so treated, while the sand piles not only take the direct weight on them, but distribute the pressure over the full width of foundations

3 I got the subject discussed with Mr K R Seshachar, Principal of the Engineering College, who gave it as his opinion that the 3 methods had been worked out on correct lines and that the estimate No III could well be adopted by slightly increasing the depth of concrete This estimate is the most economical being Rs 34,000/- less than estimate No I and Rs 18,000/- less than estimate No II

4 I request that you may kindly move the Government to cause the 3 alternative methods to be scrutinized and to sanction that method and estimate which is found to be the best so that the foundations of the building may be started at once The opinion of Mr Bhore who has also been consulted will be forwarded shortly

5 The estimate for Rs 79,000/- was placed before the City Improvement Committee and approved by them on the 13th March 1920 vide copy of resolution herewith forwarded The other alternative estimates have since been prepared on further consideration and will be placed before the Committee The question is mainly one of Engineering and has to be decided on the best professional opinion

6 The complete estimate for the Town Hall is also under preparation and will be submitted shortly, but sanction to the present estimate need not be deferred as it is desirable

25

that the foundation work should be begun in this hot season

I have the honor to be,

Sir,

Your most obedient servant,

Chairman,
City Improvement Committee,
Bangalore.

Enclosures.

3 Estimates with calculation sheets

1 plan

1 copy of Executive Engineer's letter

1 copy of City Improvement Committee's resolution

1 Memorandum

28.27

From

The Chairman,
City Improvement Committee,
B a n g a l o r e.

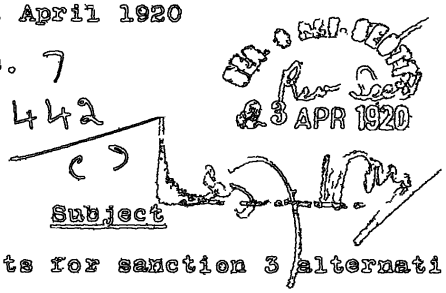
To

The Secretary, to Govt. of My
Revenue Department,
B a n g a l o r e.

Dated 22nd April 1920

Enclosures. 7

No. 442



Subject

Submits for sanction 3 alternati
estimates for the foundations of the
Town Hall in the Bangalore City.

Copy of letter No 451/Ml. dated 10/13th April 20 from the Executive Engineer, City Improvement Division, Bangalore, to the Chairman, City Improvement Committee, Bangalore

---

I have the honor to submit detailed estimates for the foundations of the proposed Town Hall, opposite the Market with (1) spread foundations in reinforced concrete (2) with reinforced concrete pile foundations and (3) with solid masonry foundations on sand piles

2. To obtain foundations of solid masonry with footings of the usual type is not possible for, even allowing for the projections of each footing course being equal to the thickness of the course, the foundations of adjoining walls coalesce If the projection of each footing be made less than the thickness of the course, the intensity of soil pressure becomes higher than 3/4 ton allowed To go deeper means to add weight without advantage and to go into water

3 The cost of reinforced concrete spread foundations as per details works out to Rs 79,000/- nearly allowing for a soil bearing capacity of 3/4 ton per square foot

4. In designing the reinforced concrete foundations, the compressive strength of concrete has been taken as 650 lbs per square inch and tensile strength of the steel 16,000 lbs and n the ratio of moduli of elasticity 15 Three claculation sheets are attached showing how the spread and depth of concrete in each foundation has been arrived at

5 The estimates as per Mr Fritchley's plans were based on a bearing capacity of soil of 1 2 to 1 24 tons per square foot, for a depth of foundations of 8' and height of basement of 3½' and a plinth area of 12,958 square feet, but the present foundations as per estimate No 1 have been based on a soil capacity of 3/4 ton per square foot and for a depth of founds of 10 feet and a height of basement of 6 feet and a plinth area of 16,313 square feet

6 The data as to dead and live loads assumed are given

(27)

Weights assumed for calculating purposes

Stone masonry	140 lbs	per C ft
Jelly concrete	150 lbs	per C.ft
Reinforced concrete	168 lbs	per C ft
Floors including live load	150 lbs	per S ft
Gallery --do--	168 lbs	per S ft
Terraced roof at top of tower	100 lbs	per S ft
Tiled roof including wind pressure	60 lbs	per S ft
Floor of stair case room	125 lbs	per S ft

in the margin

7. To get a better bearing capacity of soil and to meet the costly contingency of founding in water, pile foundations have been studied and estimated for, (estimate No 2) with concrete piles driven in pairs not less than 2½' and up to 4½' apart, all round the foundations and a platform of reinforced concrete constructed round them and the walls built on the same. On a soil of the nature expected with 20' depth from the surface a resistance of 18 tons per pile can easily be obtained The weight of the building on each pile is, according to the arrangement and spacing of piles calculated to be 7 to 11 tons

8 The estimate for a pile foundation allowing for Rs 10,000/- for a pile driving plant, which if necessary, may be hired for a less amount, amounts to Rs.63,000/- or Rs 16,000/- less than for spread foundations. The piles are proposed to be of reinforced concrete with steel shoes and the piles are so spaced that an area round each pile of 6 to 7 square feet and weight of from 7 to 11 tons on each pile has been allowed for

9. Solid foundations could be designed at a less cost if a bearing value of soil equal to one ton and above per square foot is assumed, but it is doubtful if such an assumption is safe without treating the soil To consolidate the soil sand piles have been proposed below 10 feet in depth An estimate No 3 for solid foundations on surface so prepared allowing for a bearing capacity of 1 ton per square foot works out to Rs 45,000/- or Rs 3[illegible],000/- less than estimate No 1

10 Viewing the subject from every point of view viz (1) the difficulty of obtaining materials (2) the special knowledge and supervision required of every detail (3) the cost of cement and steel at present, it appears to me that solid masonry foundation on soil consolidated with sand piles is the easiest and best

(28

to adopt

"COPY"

Chairman,
City Improvement Committee,
Bangalore.

Proceedings of the Bangalore City Improvement committee at the meeting held in the Council Chamber of the City Municipal Office at 8 A M on Saturday the 13th March 1920.

Present.

1. Rajasabhabhushana Dewan Bahadur K P. Puttanna Chetty Esqr ,C.I.E., (Chairman)
2. B.K. Garudachar Esqr., (Vice Chairman)
3. K. Srinivasa Rao Esqr., B.A
4. A.K. Pani Esqr , D.P.H, Sanitary Commissioner in Mysore
5. V. Lakshmanaswami Esqr.
6. B. Abdur Rahman Esqr ,B A.
7. B. Chinnaswamy Chetty Esqr
8. M. Ramachandra Rao Sindhe Esqr

Absent.

1. J. Bhore Esqr ,A M I C E ,Superintending Engineer, Sanitary Circle (absent on duty at Mysore)
2. Rev D A. Rees(absent at Coonoor)
3. M Subbiah Esqr ,B A ,
4. B Usman Khan Esqr

XXX XXX XXX

8 Plan and estimate amounting to Rs 78,000/- for the foundation and basement of the proposed Town Hall, submitted by the Executive Engineer, City Improvement Division

Resolution -- The estimate for foundation and basement of the proposed Town Hall amounting to Rs 78 000/- is approved Early sanction of Government should be obtained and work commenced as soon as possible

Sd K P Puttanna Chetty

Chairman,
City Improvement Committee
Bangalore

"C O P Y"

K P Puttanna Chetty

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Report to accompany plans and estimates for the superstructure of the Town Hall.

Hall Originally now designed.

The size of Hall previously proposed and designed by Mr. Fritchley was 60' X 77'. Within this area there were two rows of supporting pillars to take the gallery above and the roof. The Hall at present designed has an auditorium of 78' X 100' and a height up to ceiling of 36'. The gallery above is carried on cantilevers so that there are no pillars to obstruct view or deflect sound.

There is a 14' verandah in front and 11' wide verandahs on the sides.

There are 4 stair cases to get up to or get down from the gallery, two at the entrance and 2 near the stage - a fire proof screen will be ultimately arranged to cut off the stage from the auditorium in case of fire. This has not been provided in the estimate but may be met from contingencies. The gallery proposed runs round three sides and is 12' wide.

The plinth area of the building proposed is 16513 sq.ft. against an area of 12958 as per Mr. Fritchley's plan.

dation proposed.

Allowing roughly 6 sq.ft. for each person including gang-ways and spaces between rows of seats etc., the number that can be accommodated in the auditorium and the gallery above is about 1800

The stage accommodation provided consists of a stage 45' X 40½' with an office, dressing rooms, water-closet, lavatory and lobby. An exit on either side and two extra exits leading to the side verandahs have been

Mr tures these

Automatic fire protection will be arranged in the roof. This will have to be met from contingencies.

lation. All openings, doors and windows etc. have been made on a liberal scale and dormer windows provided in the roof.

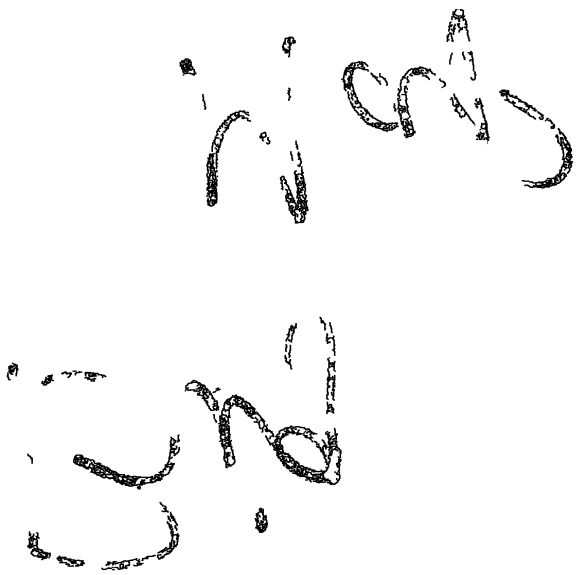
es. With regard to the acoustics of the building, the rule that the direct distance between the point of origin or the speaker and observer when subtracted from the sum of the distances of the point of origin from a reflecting surface and from the latter to the observer should not exceed 112' so that no echo may result, has been kept in view. The ceiling which is 36' high has been coved at the walls and coffered so as to break up and diffuse the sound amongst the audiance. The slope of the floor towards the stage and the gallery in rear opposite the stage rising above the speaker would also help to break up the sound waves.

It is hoped that there will be no concentration of reflected sound-waves.

The stage is rather deep and may therefore make the voice of a speaker to be lost at the back, but the depth has been regulated to suit the requirements of Indian dramas Possibly, an intermediate curtain at the back may reduce the depth and reflect the voice of the speaker.

Style of architecture The style of architecture is what is generally recognised as the Renaissance Mr. Fritchley's designs and architectural features have been retained as far as possible in these

Small Map



Detailed estimate of the probable cost of Constructing Town Hall

(5)

Details of work	No	Dimensions			Cost	Total
Superstructure Course Stone Masonry with Cement pointing around						
Hall and stage abound	1	434	2/4	16 3/4	16356	
Corner town walls	4	53 1/2	2/4	16 3/4	8065	
Rear and side wall of stair Case room	2	27	1 3/4	16 3/4	1583	
" Office and dressing	2	27	1 3/4	16 3/4	1583	
Front wall of side verandah	2	96	1 3/4	16 3/4	5628	
" " of front verandah	1	40	2/4	16 3/4	2638	
Ends " pillasters	2	1	1	16 3/4	34	
Stage front wall	1	70	1 3/4	17 1/2	2144	
Corner room walls of side	4	19	1 1/2	17	1938	
Pillasters in Stage	4	2	1 1/2	15 1/2	186	
Stage front retaining wall	1	35	1 1/2	2 1/2	131	
Masonry pillars in stage	4	2	2	2 1/2	40	
Wall around Stage pit	1	76	1 1/2	2	228	
Pedestal in front of side Verandah pier	8	2 3/4	1	6 3/4	149	
Pillasters	8	2 1/4	3/4	10 3/4	145	
Front pedestal	4	3/8	3/8	7 3/4	302	
1st floor - Hall and stage Abound	1	434	2	18 1/2	16058	
Corner town walls abound	4	69	2/4	17 3/4	11023	
Rear and side wall of Stair Case room	2	27 1/4	1 1/2	15 3/4	1288	
" " of side wall of rear verandah	2	27 1/4	1 1/2	15 3/4	1290	

Wall above Rede verandah	4	23 1/4	1 1/2	1 3/4	244
Verandah Middle portion	2	50 1/4	1 1/2	15 3/4	2374
Front wall of front verandah	1	70	2	17 3/4	2494
Cross wall above beam	2	14 1/4	1 1/2	4	171
End pilasters front verandah	2	1	1	17 3/4	36
Front wall of stage	1	70 1/4	1 3/4	18	2236
Main Gable walls	2	72 1/4	2	17 1/2	2457
Pediment in front	1	49	1 1/2	6	441
in Sides	2	48	1 1/2	5	720
Pilasters in front of Side verandah pairs	8	2	3/4	8 1/2	102
2nd floor - Corner towers walls	4	66	1 1/2	17 1/2	6930
Extra Masonry over front pilasters	1	44	2	3/2	308
Total					89,320

Deduct —

Doors in front & Rede verandah	3	7	2 1/4	12	567
	18	5 1/2	2 1/4	11 1/2	2,562
	4	5 1/2	1 3/4	11 1/2	443
Wider entrance of lobby	1	5	2 1/4	11 1/2	129
Do passage	1	5	1 1/2	11 1/2	86
Small door in Stage	4	4	2 1/4	7	252
" Turkish room	2	4 1/2	1 1/2	11 1/2	155
Stage opening	1	35	1 3/4	23	1409
Arch opening in front verand	5	9	2 1/4	12 1/2	1266
Do of Rede verandah					
Central opening	2	11 1/2	1 3/4	13	523
Other openings	4	8 1/4	1 3/4	11 3/4	678
"	8	8	1 3/4	11 3/4	1316
Windows in Stairs, Offices & dressing (Small)	4	5	1 3/4	8	280

No 2 Dressing & Stairs	6	5	1½	9	405
Windows in rear of stage	6	5	2¼	9	607
One rear of W C	2	2½	2¼	4	45
Arch work over doors	3	7½	2¼	1	51
"	18	6	2¼	1	243
"	4	6	1¾	1	42
Over entrance of Lobby	1	5½	2¼	1	12
Do passage	1	5½	1⅞	1	10
Over small door in stage	4	4½	2¼	1	41
Do ticket room	2	5	1½	1	15
Stage archway	1	40	1½	1	60
Arch work over front					
Wrought opening	5	12	2¼	1	135
Do of rude wrought					
Central opening	2	14	1¾	1	49
Over the openings	4	11½	1¾	1	81
"	8	11	1¾	1	154
Over windows in Stairs					
office & Dressing	4	6	1¾	1	42
2 Dressing & Stairs	6	9½	1⅞	1	107
One rear of stage	6	7	2¼	1	94
Burnt Stone Slabs					
Lintels in windows in	2	4	2¼	½	9
Sills of Do Outside	2	4	¾	½	3
Sills of stage windows					
Outside	6	7	¾	½	16
of windows in Stairs					
Office & Dressing	4	7	¾	½	11
One Dressing & Stairs	6	7	¾	½	16
Bed Slabs of Stage follows	4	2	2	½	8

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First floor —

Circular doors in front

And Retg wall	3	7	2	11	462
"	2	5½	2	11	242
"	12	5½	2	11	1452
"	2	5½	2	9	198
"	2	5½	2¼	9	223
Inr rear of Stairs and N.E. Door from gallery to Stone	4	5½	1½	11	363
Stage opening	2	4	2	7	112
Openings in front wall	1	35	1¾	9	551
Semicircular portion	5	9	2	11	990
Arch work	5	10	$\frac{9^2 \times .7854}{2} \times 2$		318
	5	10	$\frac{\frac{22}{7} \times 2 \times 1}{2}$		157
Side wall openings					
Middle portion	2	11½	1½	12	414
	4	8¼	1½	12	595
Arch openings in Stairs.	4	14¾	2¼	6½	863
Semicircular portion	4	14¾	$\frac{2^2 \times .7854}{2} \times 2\frac{1}{4}$		769
Arch work	4	15¾	$\frac{\frac{22}{7} \times 2\frac{1}{4} \times 1}{2}$		223
Semicircular portions over					
Front wall door	1	7	$\frac{7^2 \times .7854}{2} \times 2$		38
Arch work	1	8	$\frac{\frac{22}{7} \times 2 \times 1}{2}$		25
	4	5½	$\frac{5\frac{1}{2}^2 \times .7854}{2} \times 2$		95
Arch work	4	6½	$\frac{6\frac{1}{2}^2 \times \frac{22}{7} \times 2 \times 1}{2}$		531
Semicircular portion of Staircase door	2	5½	$\frac{5\frac{1}{2}^2 \times .7854}{2} \times 2\frac{1}{4}$		53
Arch work	2	6½	$\frac{6\frac{1}{2} \times \frac{22}{7} \times 2\frac{1}{4} \times 1}{2}$		46

Arch work over door	12	6	2	1	144
	2	7½	2	1	30
Arch work over door in Rede wall of Rede Vicars	4	6	1½	1	36
Beg windows in tower room	8	7	1½	6/2	546
Semicircular portion	8	$7^2 \times \frac{7854}{2}$		× 1½	230
Arch work over Do	8	$8 \times \frac{\frac{22}{7} \times 1\frac{7}{8}}{2}$		× 1	190
Small windows in rear of stairs & W C	4	5	1½	6	180
Semicircular portion	4	$5^2 \times \frac{7854}{2}$		× 1½	59
Arch work	4	6	$\frac{\frac{22}{7}}{2}$	× 1½ × 1	57
Lintal over Stage gallery door	2	6	2	2/3	24
Windows in Rede wall of Stage gallery	2	5	2	6	120
Semicircular opening	2	$5^2 \times \frac{7854}{2}$		× 2	39
Arch work	2	6	$\frac{\frac{22}{7}}{2}$	× 2 × 1	38
Rear Ventilator	3	5	2	2/2	75
Lintal slab over Do	3	7	2	5/8	26
Relieving arch work	3	5/2	2	1	33
Circular glazed Ventilators in Tower	16	$5^2 \times .7854$		× 1½	476
Arch work	16	6	$\frac{22}{7}$	× 1½ × 1	453
Sills of Stage gallery ventilators	3	7	2	1/2	21
Tower room windows	8	9	3/4	7/8	34
Small in W C & in Stairs by					
Case of gallery Rede wall	6	7	3/4	7/5	20
Slab over Stage gallery beam	1	37	1¼	1/3	15

62	Ground & upper floor							
	Wall plate over hall							
6	Walls Verandah portion	4	90	1	3/8	135		
	Over Ride verandah walls	2	96	1	3/8	72		
	upper	2	96/4	3/4	3/8	54		
	G & 4 floor Stair Case							
	room walls	18	15	1	3/8	101		
	Rear & Ride wall of Stair	1	127	3/4	3/8	35		
	Over Ticket & Small	4	18	3/4	3/8	36		
	Forth verandah Stair wall	3	70	1	3/8	78		
	Tower rooms (G 1 4)	4	60	2/3	1/3	53		
	Ends of front upper Verand	2	14	3/4	1/3	7		
	Bed Slab of Trusses	26	3	2	1/2	78		
	Total					24,137		
	Balance Stone in Mortar						Cft	65'83
2	Cut stone arch work with Moulding & Key Stones (exposed parts 2 sides dressed not roughly) as per deduction						Cft	1569
3	" without Moulding						"	1441
4	Burnt Stone Slabs exposed parts 2 sides dressed, not roughly						"	
	G floor Lintals of							
	windows in W C	2	4	2/4	(1/2)	18		
	Sill of window outside	2	4	3/4	(1/2)	6		
	" of Stage window	6	7	3/4	(1/2)	32		
	" of window outside in Stair office & dressing	4	7	3/4	(1/2)	21		
	In dressing & Stairs	6	7	3/4	(1/2)	32		
	Bed slab of Stage pillars	4	2	2	(1/2)	16		
	Wall plate over hall walls							
	(G Verandah portion)	4	90	1	(3/8)	360		
		12	7/2					

" Ows wreathed walls	2	96	1	(3/8)	192		
"	2	96 1/4	3/4		144		
Stair Case " room walls	18	15	1	(3/8)	270		
Rear & side wall of Stage	1	127	3/4	(3/8)	95		
Ows lined & Small Stair	4	18	3/4	(3/8)	54		
Front wreathed walls	3	70	1	(3/8)	210		
Lintal ows stage & gallery door	2	6	2	(2/3)	24		
Lintal & Bill of Stage gallery	3x2	7	2	(1/2)	84		
" of Tower room wws Ventilator	8	9	3/4	(5/8)	54		
Small ws w c, ins leg Stair Case & gallery	6	7	3/4	(5/8)	32		
Slab ows Stage gallery Side wall							
beam	1	37	1/4	(1/3)	46		
Ends of front wreath	2	14	3/4	(1/3)	21		
Tower rooms	4	60	2/3	(1/3)	160		
Bed slabs of Trusses	26	3	2	(1/2)	156		
Unfinished items	lbs				100		
Total					2117	5/L	2,117
Plastering with Chunam 2 Coats							
Wall around	1	340	-	35 1/2	12070		
Ticked & Ruled Stair Case							
room bet Rules	4	43	-	17 1/2	3010		
Stage around	1	221 1/2		15	3323		
Stair Case room	2	85	-	16 3/4	2848		
Rear rooms	2	85	-	16 3/4	2848		
Pillasters bet Rules							
in Stage	4	4	-	15 1/2	240		
Upper floor - Stage around	1	221 3/4	-	18	3992		
Stair Case or tower room							
Around	4	60		17 3/4	4260		
W. C. room by the Side of Stair	4	51 1/4	-	15 1/4	3126		

64)

Gable walls	2	70/4	.	8/2	1194		
Top tiers interior	4	60	.	17	4080		
Brick rogging cross walls in pens rooms	3×2	15	.	16 3/4	1507		
Cross wall in W C	1×2	4	.	16 3/4	134		
Total					42632		
Deduct -							
Ticket room door	2	4/2	.	11/2	103		
Stage openings	2	35	.	17 1/2	1225		
" upper portion	2	35	.	9	630		
Doors in stage ground & first floor	6	4	.	7	168		
Arch way in stairs	2	14 3/4	.	6/2	191		
Semicircular portion	2	14 3/4 × 7854/2			171		
Total					2488		
Balance plastering -						Sq	40144
Brick rogging 4½" thick brick set in Cement with - leak frames Complete							
Partition wall in rear dressing & passage	1	49	.	17	343		
First floor	2	14/2	.	6/2	188		
Semicircular portion	2	14/2 × 7854/2			165		
Total					696		
Deduct Doors	3	2/2	.	6	45		
Balance brick rogging -					651	Sft	651

Iron work | a | 0/2 | 1/2 | × 44

Floors with fireclay tiles over 6" Concrete bed

Hall	1	100	70	.	7000	
Stage	1	70	40½	.	2835	
Rear rooms	2	27½	15	.	825	
Front Stair Case room	2	27½	15	.	825	
Front verandah	1	70	14¼	.	997	
Arch openings	5	9	2¼	.	101	
Side verandah	2	90	11	.	1980	
Central projection	2	40½	3		243	
Arch Openings	2×3	28	1¾	.	294	
Sills of doors	5	7	2¼	.	79	
	16	5½	2¼	.	198	
	4	5½	1¾	.	38	
Total					15.415	
Deduct pub w Staff	1	23	17	.	391	
Ticket room & rear Small Stair Case wall	4	19	1½	.	114	
Total					505	
Balance						Sq 149 10

White glazed tiles & dados of W C

on Ground floor	2	20	.	5	200	
Arch floor	2	48½	.	5	485	
Total					685	S/ft 685

Ground floor

Teak wood doors 1¾" teak sashes, teak frames & glass fan lights & other fittings Complete

Main hall doors	3	7	.	12	252	
"	16	5½	.	11½	1012	
Stair Case room front verandah Rooms.	2	5½	.	11½	126	
					. 0	

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	In rear of Stage & rear rooms	4	5/2	.	11½	253		
	In passage & Stage	2	5	=	11½	115		
	Total					1758	S/ft	1758
10	1½" Teak panelled doors in Stage Complete							
		4	4	.	7	112		
	Ticket room	2	4/2	.	11½	103		
	Total					215	S/ft	215
	First floor - Main hall 1¾" doors Complete							
		3	7	.	11	231		
	"	14	5/2	.	11	847		
	In front Vestibule. Doors	4	5/2	.	9	198		
	In Stairs & in rear room	4	5/2	.	11	242		
	Semicircular fan lights over doors in front	1	$7^2 \times \frac{7854}{2}$			19		
	"	6	$5\frac{1}{2}^2 \times \frac{7854}{2}$			71		
	Total					1608	S/ft	1608
	1½" panelled door Complete from Gallery to Stage.							
		2	4	.	7	56		
	Total					56	S/ft	56
	Ground floor -							
11	1½" Glass Sashes to windows with iron bars frames &c Complete							
	Windows in Office and Dressing rooms	2	5	-	8	80		
		2	5	-	9	90		
	Windows in rear of Stage	6	5	-	9	270		
	In W.C	2	2/2	.	4	20		
						1		

	1st floor							
	Window in W.C.	2	5	.	8	80		
	do in Tower room	4	7	.	6½	182		
	Semicircular portion	4	$\frac{7^2 \times .7854}{2}$			77		
	Window in main wall Gallery portion	2	5	.	6	60		
	Semicircular openings	2	$\frac{5^2 \times .7854}{2}$			20		
	Total					879	S/ft	879
2	1½" plate sashes to windows of staircase with frames complete							
	Ist floor - Stairs	2	5	-	8	80		
	"	4	5	.	9	180		
	IInd floor. . Stairs	2	5	-	8	80		
	Tower room	4	7	-	6½	182		
	Semicircular portion	4	$\frac{7^2 \times .7854}{2}$			77		
	Total					599	S/ft	599
13	Circular glazed ventilators in tower							
		16	$4^2 \times .7854$			173		
	Total						S/ft	173
14	Glazed ventilators							
	in rear of stage	3	5	.	3	45		
	Total						S/ft	45
15	1¼" door in partition wall							
	of W.C. & Dressing	3	2½		6	45		
	Total						.	45
16	Jack arches terrace roofing with							
	lime plaster ceiling below of patent tiles above							
	Front verandah	1	72	16¼	.	1170		
	Side verandah	2	91¾	13¼	-	2431		

	Extra portion	2	42	3	.	252		
	Rear rooms	2	29 3/8	17	.	999		
	Front stair case room	2	29 3/8	17	.	999		
	Stage gallery	2	40 1/2	14 3/4	-	1195		
		1	42	3 3/4	-	157		
	Total					7203		
	Deduct stair case openings	2	23	5	.	230		
	Balance roofing						Sq	69 7.
17	Jack arched terrace roofing (without patent tiles at top) Complete							
	Front verandah	1	72	16/4	-	1170		
	Side verandah	2	91 3/4	13/4	-	2431		
	Extra portion	2	42	3	-	252		
	Rear rooms	2	29 3/8	17	-	999		
	Rear of front towers	2	17	12	.	408		
	Pukka terrace to roof of room-towers	4	6	6		144		
	Total					5404	Sq.	54 0
18	Roofing with Asbestos roofing tiles over tile reposes Complete.							
	Towers	4×4	10 1/2	15		2820		
	Hall and stage	2	147	43	.	12642		
	Front verandah portion	2	20	27	.	1080		
	Total					16542	Sq	1654
19	Staircases of timber & masonry Construction	2	-	-		2	No	2
20	" Small ones rear	2		-		2	"	2
21	Teak ladder in Stage gallery with painting &c complete	1	-	-	-	1	"	1
22	Gallery in main hall with curved plastic ceiling below	1	234	12	.	2808		
	Corner of stage	1	14	14	.	196		
	Total					3004	Sft	3004

Omen... Cast iron railing 3'h
with- painting &c Complete

Hall	1	120	.	.	120		
In front of Redewreadth doors	4	5½	.	.	22		
Hall gallery	1	212	.	.	212		
Total					354	R/f	354

Metal Ceiling to hall & Stage with- ornamentation

	1	142½	75	.	10,687		
Front Vreadth Central portion	1	40	14¼	.	570		
Total					11,257	S/ft	11257

Iron Trusses to hall & Stage with- painting &c complete (Span 70¼')

	13	.	.		13	No	13

Armoured Concrete Columns 12'h

To Redewreadth 1st floor

	No	dia	h				
	16	1⅓	12		256		
to front	4	2⅜	27½		261		
Total					517	C/ft	517

Moulded bases & foliated Caps to

Redewpillars	16				16	No	16

Cement or re-inforced Concrete Moulded & flutid impost Cornice with- necking Complete

In front	1	81	.		81		
Sides & rear	2	100	.	.	200		
F floor front -	1	40		.	40		
-Sides	1	12	-	.	12		
Total					333	R/f	333

29	Cut stone base to piers & tower walls.	1	200	.	.	200		
	Total						Rft	200
30	Panelled window Sills							
	G floor Tower rooms	6	5	.	2	60		
	Upper floor	8	7½	.	2	120		
	Small windows in rear of Stair	4	5	.	2	40		
	Total					220	Sft	220
31	Half plain balustrid window Rails	4	5	.	2½	20	Rft	20
32	Main Cornice below 1st ft floor band							
	to front, rear & Rails excepting tower room	1	427	-	-	427	Rft	427
33	Cornice to tower rooms with egg & dart enrichment	4	40½	-	-	162		162
34	Enrichment over Main archway Spandrel	10	4	-	1	40		
	Enrichment over 1st floor Tower windows	8×2	2	.	1	32		
						72	Sft	72
	Plain half balustrid parapets to towers	2×4	18	-	-	144	Rft	144
35	Moulded base to pilasters of tower	4×16	-	-	-	64	No	64
36	Finials Caps to Do	64	-	-	-	64	.	64
37	Parapet to roof of tower	16	16½	-	(4)	264	Rft	264

Flat plank ceiling under tower roof including framing

	4	15	15	900	S/ft	900
Covering	4			4	No	4

Coat cement ballustrade parapet complete

First floor in front	5	9	(3½')	45		
Sides "	2	60½	(3½')	121		
" Ground floor	2	32	(3½')	64		
Top floor front	2	13	(3½')	26		
Sides	4	37½	(3½')	150		
Total				406	R/ft	406

1 Moulded base to large front pillars with pedestal, Cornice complete

	4	"	"	4	No	4

2 Do Caps to Do | 4 | " | " | 4 | " | 4

3 Moulded base to side pilasters with pedestal, Cornice Complete | 2×4 | - | | 8 | " | 8

4 Do Caps to Do | 8 | " | " | 8 | " | 8

5 Main Cornice with architrave at 1st floor level

In front	2	12	-	24		
Sides	2	72	-	144		
Tower	4	40	-	160		
Total				328	R/ft	328

6 Do with Consoles &c "

Tower	8	22	"	176		
	4	20	"	80		
& Side pediment	2	52	"	104		
				360		

29			2	48	-	-	96		
		Front	1	50	-	-	50		
			1	52	-	-	52		
30		Total					558	Rft	558
47		Dental Cornice to interior of Side							
		Verandah	2	208	-	-	416		
		1st floor	2	208	-	-	416		
		Front Verandah	1	168	-	-	168		
		1st floor Centre abound	1	110	-	-	110		
31		" Ends	2	40	-	-	80		
		Slate Case room	2	52	-	-	104		
		Office & dressing	1	84	-	-	84		
32		Hall abound	1	340	-	-	340		
		Stage	1	120	-		120		
		Total					1838	Rft	1838
3	48	Armoured Concrete beam							
		Over Side verandah Columns							
		1st floor	2	98	1½	2	588		
3		Do in front	1	42	2	1½	126		
		Total					714	Cft	714
	49	Cement panelling to Louvre pillasters							
		1st floor	14	-	-		14	No	14
	50	99 Down pipes from flat terrace roofs with lead ball Joints & Clips						Rs	1000
	51	Sculpture to Tympanum of front gable & figured Sculpture above Cabral gable						Rs	600
	52	Ornamental finials over side pediments						Ls	60
	53	Enrichment around Tower circular glazed Ventilators	16	-	-	-	16	No	16
	54	Ornamental vases & top of Tower as per plan	4x4	-	-	-	16	No	16

	Dormer windows in							
	Gable	8	-	-		8	No	8
	Cornice heavy G-							
	Main gable in rear	1	180	-	-	180	R/L	180
57	Cut stone pillars with base & capital complete (2 have dowels)							
	In Stage -	4	-	-		4	No	4
58	Cornice above front Stage							
	work	1				1	No	1 amt
59	Moulded corbels (Stone)	2×12	1½	1	1½	54		
	In Stage	2	2	1	2	8		
	" Cantilevers	4	2/2	3/8	2/2	9		
	Total					71	C/L	71
60	Rolled Steel Girder for Stage Opening					lbs		
		1	37	(7½	20)	3293		
	Cross beams in front							
	Vaudeh 1st floor	2	16	(5	10)	960		
	Stage gallery	2	50	(8	4)	1800		
	"	1	46	(3	6)	552		
	Girders in Stairs & rear rooms							
	1st & 2nd floor	4×4	17	(5	10)	8160		
	Joists in front vaudeh							
	1st & 2nd floor	2×22	16	14	8)	12,672		
	Side vaudeh Centre bay	4×14	16	14	8)	16128		
	" Side "	8×8	13	13	6)	9984		
	Joists to rooms	10×4	29	13	5)	12760		
	Stage side gallery	2×10	14¾	13	6)	3540		
	" Rear	30	4	13	1½)	480		
	Pits	3	17	14	8)	918		
	Total					71247	Cwt	637

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15	1¼" door panelled Complete	Sft	2	8	.	45	112
16	Jack arched Terrace roofing with lime plaster ceiling below & patent tiles above	Sq	80	.	.	69 73	5578
17	" with cork patent tiles	"	45	"	"	54 04	2432
18	Roofing with asbestos roofing tiles over tarred paper	Sq	50	.	.	165 42	8271
19	Plain Cases of timber & Masonry Constructed &c Complete	Eac	1000	.	"	2	2000
20	Small ins near		300	.	-	2	600
21	Teak ladder in Stage with painting &c Complete	"	100	-	-	1	100
22	Gallery in Main hall with arched plaster Ceiling below	Sft	3	.		3004	9012
23	Ornamental Cast iron railing 3'h with painting &c Complete	Rft	3	8	.	354	1239
24	Metal Ceiling Complete with ornamentation	Sft	1	"	"	11257	11257
25	9 row Trusses with painting &c (70½' Span)	Eac	1200	"	"	13	15600
26	Armoured Concrete Columns	Cft	5	.	.	517	2585
27	Moulded base & golerkin 12'h	Ea	25	.		16	400
28	Cement or re-enforced Concrete Moulded & fluted cornice Caps & above with reeding Complete	Rft	1	12		333	582
29	Cut stone base & pier	.	.	6		200	75
30	Panelled window sills	Sft	1	.		220	220
31	Half plain balustrade window Sills	Rft	2	.		164	328
32	Main Cornice below 1st floor level	Rft	2	"	.	427	854

	Cornice with egg & dart enrichment	-	2	8	-	162	463
4	Enrichment over main archway &c	S/ft	2	-	-	72	144
35	Moulded base & pilasters of tower	Ea	1	8	-	64	96
36	Foliated Caps & Bo.	-	3	-	-	64	192
37	Parapet & roof of tower	R/ft	2	-	-	264	528
38	Ceiling with teak planks 3/4 thick with panelings &c	S/ft	1	4	-	900	1125
39	Crestings	Ea	200	-	-	4	800
40	Cast cement balusters parapet wall	R/ft	3	8	-	406	1421
41	Moulded base & large front pillars with pedestal Cornice &c complete.	Ea	50	-	-	4	200
42	Foliated Caps & Bo.	-	30	-	-	4	120
43	Moulded base & Redi pillasters with pedestal Cornice &c Complete	-	30	-	-	8	240
44	Foliated Caps & Bo.	-	20	-	-	8	160
45	Main Cornice with- architrave at first floor	R/ft	3	-	-	328	984
46	Do with- Consoles &c	-	4	-	-	558	2232
47	9" Central Cornice	-	1	8	-	1838	2757
48	Armoured Concrete beam	C/ft	4	-		714	2856
49	Cement pointing & base pilasters	Ea	10	-		14	140
50	G 9 Down pipes 3½ dia with- Lead bell mouths		LS	Repro.			1000
51	Sculpture & Tympanum of front gable & figures Sculpture above Central gable		LS	Repro.			600
52	Ornamental dimalo over Redi pediment		LS	Repro.			60

53	Enrichment around							
54 & 54½	Tower Circular glazed Vent Ornamental vases	Ea "	40 10	" "	" "	16 16	640 160	
55	Dormer windows in roof complete	Ea	100	"	"	8	800	
56	Cornice heavy & Brass Gable in rear	R/L	2	"	"	180	360	
57	Cut Stone pillars 9"x9" with base & Capital 2 Courses dressed	Ea	60	"	"	4	240	
58	Silicate painting 6 doors in 2 coats	Sq	6	"	"	85 00	510	
59	Rounded Stone Coping 2 Courses dressed	c/l	2	8	"	71	177	
60	Rolled Steel Gratings & posts with painting complete	Cwt	22	"	"	637	14,014	
61	Teak wood work including 2 coats of wood oil	c/l	8	"	"	1268	10,144	
62	Hardage Slab dressed or 1½" plank sills of windows		LS	Repairs			100	
63	T. & G planking & put with Shifting arrangement complete	S/L	2	"	"	414	828	
64	For Models		LS	Rs			600	
	Total						180159	
	Contingencies at 5%						9007	
	Grand Total						189166	
								1,89,16

Aug 21 1914

H M Hattersley
Chairman,
City Improvement Committee

J. G. Taylor
Executive Engineer
City Improvement Trust

M. [illegible]
President, City Improvement Trust

City Improvement Fund

Detailed estimate of the probable Cost of Constructing Town Hall in front of the City General Market Bangalore

Amount of Estimate.
Rs. 189,166

No 442

Encls Five

OFFICE OF THE CHAIRMAN, CITY IMPROVEMENT COMMITTEE

Dated, Bangalore, 17th Feb. 1921

Ml 181/19-15

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REV SE... Sec'y FEB 1921

From

DEWAN BAHADUR RAJA SABHA BHUSHANA
K P PUTTANNA CHETTY, CIE,
Chairman, City Improvement Committee,
Bangalore

To

B. Ramaswamaiya Esq., B.A.,B.L.,
Secretary to the Government of His Highness
the Maharaja of Mysore, Revenue Department,
B a n g a l o r e.

D No 6354
21-2-21

SIR,

Adverting to your letter No.R 1762/Ml.181-19-13 dated 4th August 1920, requesting the resubmission of the estimate for the Foundation and Basement of the Town Hall after modifying it on the lines suggested by the Chief Engineer in Mysore, I have the honor to state that as per suggestions of the Chief Engineer conveyed in the aforesaid letter an estimate for Rs.1,22,917/-, providing a steel concrete raft over the whole site was prepared by Mr. T. Ramachandra Rao, Executive Engineer, City Improvement Division and submitted by him to the Chief Engineer, in together with two other alternative estimates reducing the cost without however sacrificing strength and efficiency in construction. After a careful examination of the alternative estimates prepared by the Executive Engineer, City Improvement Division, and after personal consultation and discussion with him, the Chief Engineer in Mysore has finally approved of the estimate costing -- Rs.78,514/- providing steel concrete raft only between the main walls and the verandah retaining walls and not over the whole area of the site, as originally proposed. A copy of the Chief Engineer's letter No.6369 dated 20th January 1921 to the Executive Engineer, City Improvement Division, reviewing the estimates and approving of the one for Rs.78,514/- is enclosed for the information of Government.

2. I have now the honor to request that you will be so good

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as to obtain the early sanction of Government to the estimate for Rs.78,514/- which is herewith submitted together with plans and calculation sheets.

3. The data for the rate of Rs.2-8-0 per cubic foot for reinforced concrete and calculation to determine the details of steel reinforcement required referred to in para 4 of Chief Engineer's letter are also enclosed.

4. I also submit herewith a copy of the resolution of the City Improvement Committee approving of the above estimate.

I have the honor to be,

Sir,

Your most obedient servant,

Chairman,
City Improvement Committee,
Bangalore.

Enclosures

1 Copy of chief Engineer's letter No 6369 dated 20-1-21
1 C.I.T. C's resolution
1 Estimate
1 Calculation sheet (4 pages)
1 plan (Blue print)

Five

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Proceedings of the Bangalore City Improvement Committee at the meeting held in the City Municipal Office at 8 A.M., on Saturday the 12th February 1921.

P r e s e n t.

1. Dewan Bahadur Raja Sabha Bhushana K.P. Puttanna Chetty., C.I.E., (Chairman)
2. B.K. Garudachar Esq., (Vice Chairman)
3. K. Sreenivasa Rao Esq., B.A.,
4. B. Usman Khan Esq.,
5. M. Ramachandra Rao Sindia Esq ,
6. B. Chinnaswami Chetty Esq.,
7. V. Lakshmanaswami Esq.,
8. M. Subbiah Esq., B A.,

A b s e n t.

1. John Bhore Esq., A.M.I.C.E., Superintending Engineer, Sanitary Circle.
2. A.K. Pani Esq , D.P.H., Sanitary Commissioner.
3. B. Abdur Rahmon Esq., B A ,
4. Rev. D.A. Rees (Intimated his inability to attend the meeting)

XX XX XX

4. Letter No.1762 M1.181-19-13 dated the 4th August 1920, from the Secretary to Government, Revenue Department, requesting that the alternative estimate amounting to Rs.79,000/- submitted to Government for sanction for the foundations and basement of the Town Hall in steel concrete spread foundations may be modified as per certain suggestions made by the Chief Engineer and resubmitted for sanction.

Estimate prepared by the Executive Engineer, City Improvement Division as above together with two alternative estimates

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prepared by the same officer (1) limiting the steel concrete raft to the area between the main walls and the verandah retaining walls and omitting the raft under the space covered by the hall and costing Rs.78,514/- and (2) providing surki concrete instead of cement concrete with double reinforcement and costing Rs.51,576/-.

Also letter No.6369 dated 20th January 1921 from the Chief Engineer to the Executive Engineer, City Improvement Division, reviewing the three aforesaid estimates and approving the estimate for Rs.78,514/- providing steel concrete raft over a portion of the site only.

Memo No.546 dated 11th February 1921 from the Executive Engineer, City Improvement Division, submitting for information, letter dated the 8th February 1921 from Messrs. K.S. Dhondy & Co., Bombay, stating that their quotation for the preparation of a design for the foundations and basement of the Town Hall in armoure concrete and for the execution of the work will be discussed and settled by a representative of the Firm about the middle of February 1921.

Resolution -- The revised estimate for Rs.78,514/- as approved by the Chief Engineer may be submitted to Government for sanction.

" C O P Y "

Chairman,
City Improvement Committee,
Bangalore.

Copy of letter No.B.6369 dated Bangalore, 20th January 1921 from the Chief Engineer of Mysore, Bangalore, to the Executive Engineer, City Improvement Division, Bangalore.

I return herewith the 3 alternative estimates for the foundations and basement of the proposed Town Hall at Bangalore received with your D.O. letter No.201 dated 15th November 1920.

2. The second alternative estimate of Rs.78,514/- providing for a raft foundation, only for the main walls and the verandah walls and the intervening space will, in my opinion, do, but I am doubtful from the information available at the present stage, i.e. until the foundations are actually excavated and exposed for view, about the sufficiency of the depth of foundations provided, viz, 6 feet below ground level against 8 feet as originally proposed. This may however be left to be decided after the excavations as per this estimate are made, and this estimate may be submitted for sanction now

3. Should it be necessary after exposing the foundations excavated to the depth of 6 feet to increase that depth by a foot or two, all that is necessary to do is not to increase the depth of concrete raft but only to provide an extra footing of 1' or 2' depth, as the case may be. In that case , the extra cost will be, roughly calculated, about Rs.1000/- per foot increase.

4. Again no details are given for the rate of Rs 2-8-0 a cubic foot assumed for the concrete work. This is a very liberal rate and the iron reinforcement must be provided according to calculations and not simply assumed as 3" mesh as has been done in the present case.

"C O P Y"

Chairman,
City Improvement Committee,
Bangalore.

Improvement Rs.

Details estimate of the probable Cost of Constructing foundation & basement of the proposed Town Hall

	Details of work	No	Dimensions			Cost	Total
1	Earth work excavation foundation & filling including watering and consolidation						
	A to B	1	82 1/4	15 1/4	6	7526	
	B to C	1	112 3/4	21 3/8	6	14460	
	C to D	1	111 1/4	13 5/8	6	9095	
	D to E	1	103 1/4	19 3/4	6	12235	
	E to F	1	111 1/4	47 1/4	6	31539	
	F to G	1	103 1/4	19 3/4	6	12235	
	G to H	1	111 1/4	13 5/8	6	9095	
	H to I	1	112 3/4	21 3/8	6	14460	
	Corner walls in hall	4	17	5	6	2040	
	Pillars in stage	4	4 1/2	4 1/2	6	486	
	Total					113171	
	Deduct — Earth work in Auditorium	1	96 1/2	66 1/4	6	38359	
	stage	1	35 1/4	66 1/4	6	14012	
	Total					52371	
	Balance earth work						Cft 60,800
2	Armoured Concrete foundation walls - x - p m						
	1/3 quantity of earth-work						20267
3	Foundation — Coursed rubble masonry hammer dressed						
	Main long walls	2	168	4	4	5376	
	Front and rear wall of hall	2	68 1/4	4	4	2184	
	Front wall of stage at ends	2	17 3/8	3 1/4	4	452	
	Front Verandah retaining wall	1	68 1/4	4	4	1092	
	Pillars in front Verandah	4	4 1/2	3	4	216	

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Tower portion two Rede	4	31½	4	4	2215
Adjacent portion to tower 2 Rede	4	25¼	¾	4	1513
Side Wrandah retaining wall	2	94½	¾	4	2457
Pilasters of Piers in Rede	4×2	3¼	¼	4	130
Corner rooms in Hall Wrandah	4	18¾	2¾	4	825
Pillars adjoining walls of Stage	4	2	2	4	64
Intermediate pillasters in Stage	4	2½	2½	4	100
Total					16417
Basement inner plinth Main Wall					
	2	166½	2¾	6	5495
Front wall of Hall	1	69½	2¾	6	1147
Front wall of Stage at ends	2	17½	2¼	6	472
Front retaining wall of Stage Centre portion	1	34½	1½	6	309
Front Wrandah retaining wall	1	69½	2¾	6	1147
Side Wrandah retaining wall	2	50½	2¼	6	1363
Cross walls at Rede Wrandah	4	13	2¼	6	702
Corner rooms in Hall	4	20	2	6	960
Pillasters adjoining wall of Stage	4	2	2	6	96
Intermediate pillars in Stage	4	2	2	6	96
Retaining wall of part in Stage	1	76	1½	6	684
Front Step front portion	1	$95 \times \frac{13\frac{1}{2}+70}{2} \times \frac{3}{4} \times 5\frac{1}{2}$			3671
Do rear portion excluding basement of pillars	1	69½	3	5½	1147
Side Steps front portion	2	81	$\frac{10+12}{2}$	4	3645
Do rear portion 3 Rede	2	44½	2½	4¾	1057
Do do excluding basement of pillasters	2	44½	1½	5½	734
Rear step left Rede	1	10	$\frac{8+1}{2}$	5	225
Do right Rede	1	$\frac{12\frac{1}{2}+15\frac{1}{2}}{2} \times 4 \times 5\frac{1}{2}$			198
Total					23148

Account for excavated portion of outer plinth
in main cross wall length (at rear end)

	1	13¼	2¾	6	219	
Included portion of steps & slabs		C/S			355	
Slabs for fixing verticals of door frames in main long walls	2×16	1½	2¾	½	66	
In front wall	2×5	1½	2¾	½	21	
In Cross walls of Verandah	2×4	1½	2¼	½	13	
In Corner rooms	2×2	1½	2	½	6	
Sill slab of rear door in main wall left side at steps	1	7	2¾	½	10	
Total deductions					690	
Balance foundation of inner plinth						c/ft 38875
4 Filling foundation with Event Jelly Concrete in Chunnam						
Steps in front	1	99	14½	2	2871	
Do in rear between front pillars	5	10½	3	2	315	
Side steps front portion	2	68	14¼	2	3876	
Do rear portion at ends	2×2	12	4½	2	432	
Do Do between pillars	2×2	9	1¼	2	90	
Do Do	2	12½	1¼	2	62	
Steps in rear left side	1	10	9	2	180	
Side wall of Do	1	10	3	2	60	
Steps in rear right side	1	14	4½	2	126	
7 Retaining wall of port in	1	76	2	2	304	
Front retaining wall of Stage centre portion	1	34½	4	2	276	
Total ordinary Concrete					8592	c/ft 8592
5 Coursed rubble in ordinary Cement (to outer & face of outer plinth)						
Rear wall of hall	1	69½	2¾	6	1147	
Side verandah retaining wall	2×2	22½	2½	6	1215	

Tower portion	4	34½	2¾	6	2277		
Adjacent portion to tower only outer plinth	4	13½	2¼	6	729		
68) Rear end of main longl wall	1	13¼	2¾	6	219		
Side wall of steps on rear left side	1	10	1¼	5	62		
Total					5649		
Deduct for plinth- slab on rear	1	69½	1	⅝	43		
Do on side wall retaining wall	2×2	22½	2¼	⅝	127		
Tower portion	4	34½	1	⅝	86		
Do extra width for sill slab of door in rear passage	1	7	1¾	⅝	8		
Coping slab on portion adjacent to tower	4	13½	1	⅝	34		
On rear end of main longl wall right side	1	13¼	1	⅝	8		
On side wall of Step	1	10	1½	½	8		
Total					314		
Balance outer plinth					5335	c/f	533
Brown Stone Coping Slabs to outer plinth including 2 lines dressing (Projection from wall 3")							
Rear ends of main longl walls including door portn	1	21	1¼	⅝	16		
Sill of door in do portion	1	7	3	⅝	13		
Rear wall of hall	1	73	1¼	⅝	57		
Tower portion including doorway in rear passage	3	36½	1¼	⅝	86		
	1	29½	1¼	⅝	23		
Sill of door in do portion	1	7	3	⅝	13		
Adjacent portion to tower including wreath portion	4	16	1¼	⅝	50		
Side wreath	4	22	2¼	⅝	124		
Do	4	4	1¼	⅝	13		
Total Cut Stone Coping					395	c/f	395

"Cone slabs 6" & 8" thick including
" Lines drawing as per estimate

Steps in front including overhanging	11	100	1½	(6)	1650		
4 steps in sides	2×9	81	1½	(6)	2187		
Do	2×2	44½	1½	(6)	267		
Steps in rear left side	9	10	1¼	(7½)	112		
Do right side	8	4	1¼	(7½)	40		
Do top slab	1	4	5		20		
Plinth slabs in side Verandahs Centre portion	2	42	1½	(6)	126		
Do in front to including pillar portion	1	70	3¾	(6)	263		
Total slabs 6" & 8" thick					4665	S/ft	4665

Burnt stone slabs 6" thick roughly dressed including Cutting holes for fixing the Verticals of door frames

In main long walls	2×16	1½	2¾	(6)	132		
In front wall of hall	2×5	1½	2¾	(6)	41		
In Cross walls of Verandah	2×4	1½	2¼	(6)	27		
In Corner rooms	2×2	1½	2	(6)	12		
Total					212	S/ft	212

Ex earth filling to plinth including watering & Consolidating

Hall with Corner rooms	1	99½	69½	6	41492		
Slabs	1	69½	40¼	6	16784		
Front Verandah	1	69½	13½	6	5630		
Side Verandah	2	89½	10½	6	11277		
Do	2	40	3	6	1440		
Tower rooms	4	27	14½	6	9396		
Total					86019		

Deduct for thickness of basement

For walls of Corner rooms in	4	20	2	6	960		
Basement of pillars with steps	4	2	2	6	96		
Pillars adjoining walls in	4	2	2	6	96		
Total deduction					1152		

Balance				84867	
Add 10/pc for Settlement				8487	
Total earth-filling				93354	cft. 93354

90)

Deduct -

Cost of extra re-in-forcement already taken in rear of stage to a width of 5¼'

in E W 1 × 62½ × 5¼ × 2 · 653 cft

@ 2/8 - per cft - = 1630

Contingencies 80

Total 1710 Rupees

Abstract

(9f)

	Items of work	Pcs	Rate			Q	C	TC
	Earth-work excavation ground & filling in clearing working & tamping	cft 100	2	.	.	60800	1216	
	Armours Concrete foundations	Cft	2	8	.	20267	50667	
3	Coursed rubble masonry hammer dressed Ground & inner plinth	cft 100	31	4	.	38875	12133	
4	Filling foundations with burnt jelly Concrete in Chunnam	"	25	.	.	8592	2148	
5	Coursed rubble masonry Cement pointed at joints & face dressed	"	45	.	.	5335	2401	
6	Cut stone coping slabs to outer plinth including 2 lines	Cft	1	12	.	395	691	
7	Burnt stone slabs 6" to 8" thick dressed including 2 lines dressing	Sft	.	14	.	4665	4082	
8	Burnt stone slabs 6" thick roughly dressed including Cutting holes for fixing Uprights of door frames	Sft	-	10	.	212	133	
9	Earth-filling to plinth-well watered & consolidated	cft 100	1	"	.	93354	934	
10	Draining pipes or filling with Cement Concrete wherever brick soil is met with	Ld					2000	
	Total						76405	
	Contingencies at 5%						3820	
	Grand total						80225	
	Deduct Cost of extra re-appropriated						1711	
	Balance							78514

Chairman,
City Improvement Committee,
Bangalore

Executive Engineer
C & Bs

City Improvement Bd

Attached estimate of the probable Cost of Construction, Furnishing and Basement of the proposed Town Hall on Bowling Alone City

Amount of estimate $78,51.

Data for 1 Cft of reinforced Concrete:—

1 Barrel or 3½ Cft of best portland cement	26	.	.
9 Cft of Clean Sharp Sand	1	.	.
18 Cft of Spread Jelly	3	8	.
Labour Charges including Watering	3	.	.
Cost of Steel rods, Wire & Labour	14	.	.
Extra Cost of patent rods if required in place of ordinary bars for Reinforcement	4	8	.
Total _____ Rs	52	.	.
Contractors profit @ 15% _____	7	12	.
Total _____	59	12	

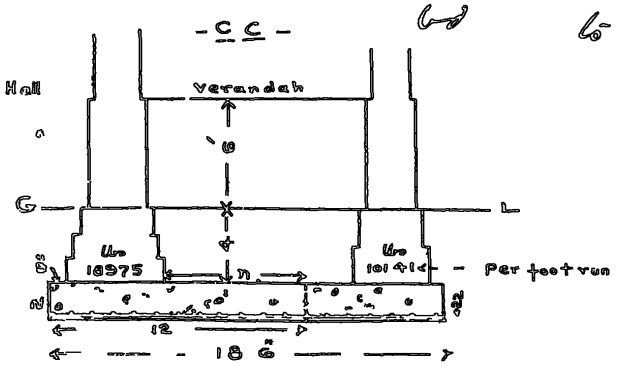
for 24 Cft of Concrete

for 1 Cft Rs 2-7-10 or 2-8-0

11 Rft - 6 bars of 18½" c/c/2" = 111
19 bars of 1' c/c/2" = 19
Total 130 Rft @ 667 lbs per Rft = 8671 lbs @ Rs 28/ per cwt = 21 10 10 for 37 Cft
for 1 Cft = 0 9 4
for 24 Cft 14 00

Calculation for finding out the area of Steel required per foot run of foundation

W = Total external load above Concrete in pounds
n = Offset of Armoured Concrete in inches
d = Depth in inches from Centre of reinforcement to top of Concrete
b = 12 inches (1 Rft)
P = $\frac{A}{bd}$ = the ratio of the area of Steel to that of Concrete



Bending moment $M = \frac{W n}{4}$
$= \frac{18975}{4} \times 81 = 384244$ in lbs

Resisting moment $M = R b d^2$
$R = \frac{W n}{4 b d^2} = \frac{18975 \times 81}{4 \times 12 \times 22^2} = 6615$

P T O

Reference to table 2 page of 9 c s book
or to found that for the
Constant, the value of P
Corresponding to R - 66 15 is 0046

$P = 0046$

The required area $A = pbd$

$= 0046 \times 12 \times 22 = 1215 \text{ sq.}''$

per foot run.

4 rods of 5/8" } or x P.M
or 7 rods of 1/2" per foot run } 1/2" x 1/4 Stirrups
from beam way

Calculation Sheet for Pressure on Soil

93

		Pressure on 1 Sft. of soil in Tons
A to B	Stage end wall Weight on 10 Rft of Soil above ground level Stone Masonry.— Basement $10 \times 2\frac{3}{4} \times 6$ = 165 cft Superstructure $10 \times 2\frac{1}{4} \times 17\frac{1}{2}$ = 394 " Front floor $10 \times 2 \times 19\frac{1}{2}$ = 390 Total ——— 949 Deduct Window G and F floors — $2 \times 5 \times 2\frac{1}{8} \times 8$ - 170 Semicircular portion $2 \times 5^2 \times \frac{7854}{2} \times \frac{2}{8}$ = 41 Total ——— 210 Balance above Masonry 739 cft @ 140 lbs = 103460 Gallery 10×6 = 60 Sft- at 150 lbs - 9000 Main tiled roof 10×39 = 390 @ 60 lbs - 23400 Total weight above ground level for 10 Rft 135860 Do for 1 Rft ——— 13586 lbs Below ground level weight for 1 Rft - Stone Masonry Ground above $1 \times 4 \times 4$ = 16 @ 140 lbs = 2240 Concrete $10 \times 1 \times 2$ = 20 × 168 = 2360 Total on 10 sft of Soil 13586 + 2240 + 2360 = 18186 Weight on 1 Sft of Soil $\frac{18186}{10} \times \frac{1}{2240}$ =	81
B to C	Town wall — weight on $17\frac{1}{4}$ Rft of Soil Above ground level. Basement - $17\frac{1}{4} \times 2\frac{3}{4} \times 6$ = 285 Superstructure G F $17\frac{1}{4} \times 2\frac{1}{4} \times 17\frac{1}{2}$ 679 Do 1st Floor $17\frac{1}{4} \times 2\frac{1}{4} \times 18\frac{1}{2}$ = 718 Do 2nd " $17\frac{1}{4} \times 1\frac{1}{2} \times 17$ - 440 Parapet $17\frac{1}{4} \times 1 \times 3$ = 52 Total ——— cft 2173 Deduct - Window G F $5 \times 1\frac{1}{2} \times 9$ = 68 " F Floor $7 \times 1\frac{7}{8} \times 6\frac{1}{2}$ 85 Do Semicircular $7^2 \times \frac{7854}{2} \times 1\frac{5}{8}$ = 31	

94)

~~Doors~~

~~Do. G F~~ $7 \times \frac{3}{8} \times 12$ ~~32~~

~~Do First floor~~ $10 \times \frac{3}{8} \times 14\frac{1}{2} =$ ~~54~~

~~Total deductions cft~~ 326

~~Balance Stone Masonry cft 10847 @ 140 lbs~~

~~= 258580~~

~~Floors $2 \times 8 \times 7\frac{1}{2} = 120$ @ 125 lbs = 15000~~

~~Tiled roof $\frac{14+8}{2} \times 16 = 160$~~

~~Pukka terrace $\frac{6 \times 6}{2} = 18$ @ 100 lbs =~~

~~Total weight above ground level~~

~~for $17\frac{1}{4}$ Rft = 284980~~

~~Do Do for 1 Rft 16521 lbs~~

~~For 2 walls $16521 \times 2 = 33042$~~

~~Below ground weights for 1 Rft~~

~~Masonry foundation $1 \times 4 \times 4 = 16$ @ 140 = 22~~

$1 \times 4 \times 4$ 16 lbs = 22

~~Concrete $23\frac{1}{4} \times 1 \times 2 = 46\frac{1}{2}$ @ 168 = 7812~~

~~Main hall roof $1 \times 39 = 39$ @ 60 lbs = 2340~~

~~Total on $23\frac{1}{4}$ Sft of Soil = 4767~~

~~W on 1 Sft of Soil $47674 \times \frac{4}{93} = \frac{2050}{2240}$~~

C & D For 10 Rft above ground level.

Stone Masonry Hall walls ---

Basement $10 \times 2\frac{3}{4} \times 6 =$ 165

~~Superstructure G F $10 \times 2\frac{1}{4} \times 17\frac{1}{2}$~~

~~First floor $10 \times 2 \times 19\frac{1}{2} =$ 390~~

Total ---------- 949

~~949 at 140 lbs = 132860~~

Gallery $10 \times 12 = 120 \times 150$ = 18000

Verandah floor $10 \times 7\frac{1}{2} = 75 \times 150 =$ 11250

Roof $10 \times 7\frac{1}{2} = 75 \times 100 =$ 7500

Main tiled roof $10 \times 39 = 390$ @ 60 lbs = 234

Total for 10 Rft ---- 193010

For 1 Rft of Soil in lbs $\frac{193010}{10}$ = 193 lbs

Walls $1\frac{3}{4}$' wall. Basement $10 \times 2\frac{1}{4} \times 6 =$ 135

Superstructure $10 \times 1\frac{3}{4} \times 17\frac{1}{2} =$ 306

~~First floor~~ $10 \times 1\frac{1}{2} \times 16\frac{1}{2} =$ 247

Parapet $10 \times 1 \times 3 =$ 30

Total ---------- 718

Total 718

Deduct windows

$2 \times 5 \times 1\frac{5}{8} \times 8 = 130$

Balance 588 @ 140 = 82320

From 1 Rft 82320 = 8232 lbs
10

1 Rft of Verandah floor

$1 \times 7\frac{1}{2} = 7\frac{1}{2} \times 150 = 1125$ } = 1875
Roof $1 \times 7\frac{1}{2} = 7\frac{1}{2} \times 100 = 750$ }

Below ground:—

Stone masonry

Hall wall $1 \times 4 \times 4 = 16 \times 140 = 2240$

Room wall $1 \times 3\frac{1}{4} \times 4 = 13 \times 140 = 1820$

Concrete $23 \times 1 \times 2 \times 165 = 7590$

Total weight on 23 sft of Soil 41058 lbs Tons

W on 1 sft of Soil in tons: $\frac{41058}{23} \times \frac{1}{2240}$ 79

D & E

Main wall of hall W on 13 Rft of Soil

Above ground level

Stone masonry - Basement $13 \times 2\frac{3}{4} \times 6 = 214$

Superstructure G F $13 \times 2\frac{1}{4} \times 17\frac{1}{2} =$ 512

do. First floor $13 \times 2 \times 19\frac{1}{2} =$ 507

Total cft 1233

Deduct for Door G F $5\frac{1}{2} \times 2\frac{1}{4} \times 11\frac{1}{2} =$ 142

Do First floor $5\frac{1}{2} \times 2 \times 9\frac{1}{2} =$ 104

Total deductions 246

Balance Stone masonry 987 cft lbs

@ 140 lbs 138180

Gallery $13 \times 12 - 156$ sft @

168 lbs = 26208

Verandah floor 13×7 91 @ 150 lbs - 13650

Do Roof $13 \times 7 - 91$ @ 100 lbs = 9100

Main tiled roof $13 \times 39 = 507$ @ 60 lbs = 30420

Total weight above ground level

for 13 Rft = 217558 lbs

Do. Do for 1 Rft = 16735 lbs

Verandah retaining wall W on

12 Rft of Soil

Above ground level Stone masonry.

P T O

96)

Basement $12 \times 2\frac{1}{4} \times 6 \cdot 162$

Superstructure G F $12 \times 1\frac{3}{4} \times 17\frac{1}{2} : 367\frac{1}{2}$

Piers First floor $4 \times 1\frac{1}{2} \times 12 : 72$

Entablature $12 \times 1\frac{1}{2} \times 4\frac{1}{2} = 81$

Parapet wall $12 \times 1 \times 3 = 36$

Total $718\frac{1}{2}$ cft

Deduct archway

G F $8\frac{1}{4} \times 1\frac{3}{4} \times 12 : 173\frac{1}{4}$

Balance cft $545\frac{1}{4}$ @ 140 lbs :	76335 lbs	
Verandah floor $12 \times 7 : 84$ sft @ 150 :	12600	
" Roof $12 \times 7 : 84$ @ 100 :	8400	
Balastrade parapet &c 18 cft @ 140 :	2520	
Total w above grounds for 12 Rft =	99855 lbs	
for 1 Rft	8321 lbs	

Below grounds

Verandah	$1 \times 3\frac{1}{4} \times 4 : 13$ @ 140 : 1820 lbs	
Hall	$1 \times 4 \times 4 = 16$ @ 140 · 2240	
Concrete	$18\frac{1}{2} \times 1 \times 2 : 37 \times 168 = 6216$	
Total on $18\frac{1}{2}$ sft of Soil =	35332	7 Tons
on 1 sft of Soil in tons	$35332 \times \frac{2}{37} \times \frac{1}{2240}$	.85

E & F Details as above

16735 + 8321 + 1820 + 2240 + 7560

Concrete $22\frac{1}{2} \times 1 \times 2$ 45×168 7560	= 36676 lbs	Tons
on 1 sft of Soil in tons	$36676 \times \frac{2}{45} \times \frac{1}{2240}$	72

F & G	as per D & E	85
G & H	as per C & D	79
H & I	as per B & C deducting the roof of main hall 45334 lbs on $23\frac{1}{4}$ sft	
	W on 1 sft $45334 \times \frac{4}{93} \times \frac{1}{2240} =$	87

Rear wall of Stage

W on 70 Rft of wall

Basement -	$70 \times 2\frac{3}{4} \times 6 : 1155$	
Superstructure G F	$70 \times 2\frac{1}{4} \times 17\frac{1}{2}$	2756
Do 1st floor	$20 \times 2 \times 19\frac{1}{2} = 2730$	
Gable	$70 \times 2 \times \frac{19}{2}$	1330
Total		7971 cft

W in G F $5 \times 5 \times 2\frac{1}{4} \times 8 = 450$.
do Semicircular $5 \times 5^2 \times \frac{7854}{2} \times 2\frac{1}{4} \cdot 110$
Ventilator in F F $3 \times 5 \times 2 \times 3^2 = 90$
Total deductions 650

Balance Stone masonry
cft 7321 @ 140 = 1024940
Gallery $42 \times 3 = 126$ Sft @ 50 lbs. 6300
Total weight above ground level for 70' = 1031240 lbs
~~for~~ 1 Rft = 14732 lbs
Weight of roof 2339 } = 17071 lbs on 1 Rft

Below ground as per Map
end wall A & B 2240
2360

Total on 10 Sft of Soil 21671
W on 1 Sft of Soil in tons $\frac{21671}{10} \div 2240$

Chief 17/2/21

Manager
— Executive Engineer,
City Improvement Tr